



CROP WEATHER CALENDAR AMFU KANPUR, U.P.

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Farmer First Android Application
https://github.com/Shivam-gkms/Farmer_First

Farmer Service Portal
<https://shivam-gkms.github.io/amfu/>

Developed by
Chandra Shekhar Azad University of
Agriculture & Technology, Kanpur (U.P.)
Under Gramin Krishi Mausam Sewa (GKMS) &
AICRP on Agrometeorology



Crop Weather Calendar of Kanpur Nagar, 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


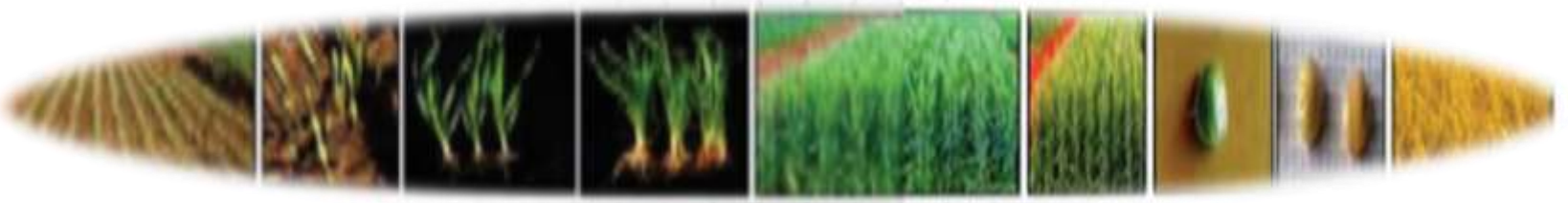

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Crop-weather calendar of Rice (*Oryza Sativa* L.)

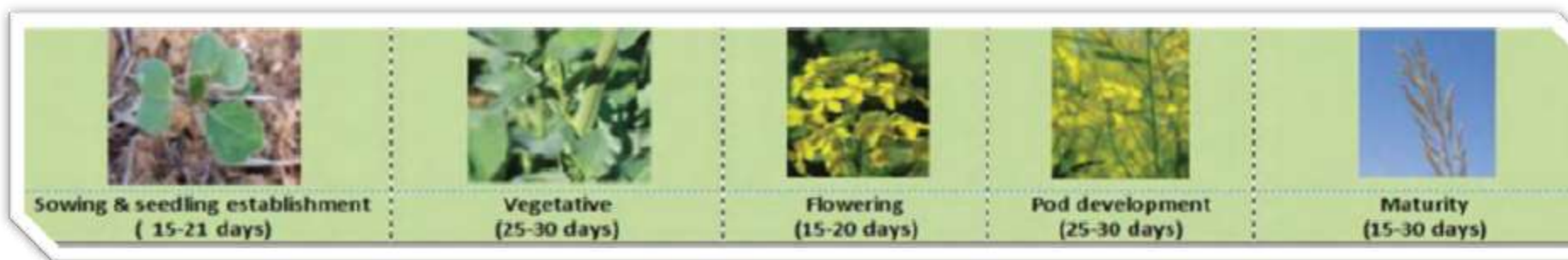
Climatic Normal	Crop- Rice						Duration –120- 135 (Days)																		
	Month	June					July				August					September				October					
	Std. week	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45		
	Tmax (°c)	42.2	34.7	33.8	33.3	33.9	34.9	35.6	33.0	33.4	33.5	32.2	35.0	33.5	32.9	33.6	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 rain Vegetative 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 Normal	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 (<i>Puccinia striiformis</i>)		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 (<i>Puccinia triticina</i>)		Tmax: 20–25°C - RH: 60–70% - Clear, warm days followed by cool nights - Light dew (Tillering to grain filling stage)																		
	Loose smut (<i>Ustilago tritici</i>)		Temp: 18–24°C - High soil and air moisture during flowering - Infected seed is major source Infection at flowering stage; symptoms appear at ear emergence																		


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

Climatic Normal	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	




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 Normal	Crop- Maize (<i>Kharif</i>)					Duration – 110-120 (Days)												
	Month	June				July					August				September			
	Std. week	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
	Tmax (⁰ c)	39.9	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
	Tmin (⁰ c)	24.8	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
	RHm(%)	52	48	79	89	92	92	80	80	88	81	81	87	80	82	92	87	85
	RHe(%)	29	29	69	72	68	71	65	57	73	65	70	79	64	67	72	69	56
																		
Phenophase wise weather for better yield	Sowing to emergence		Knee height		Tasseling		Silk formation		Cob filling		Physiological maturity							
Tmax (⁰ c)	28–32°C		30–35°C		30–35°C		30–34°C		28–32°C		25–30°C							
Tmin (⁰ c)	20–24°C		22–26°C		22–26°C		22–26°C		20–24°C		18–22°C							
RHm(%)	85–90%		80–85%		75–80%		75–80%		70–75%		65–70%							
RHe(%)	70–80%		65–75%		60–70%		60–70%		55–65%		50–60%							
Rainfall (mm)	40–60 mm		30–50 mm		20–40 mm		20–30 mm		15–25 mm		<10 mm (dry harvest)							
Congenial weather for pest/diseases	Stem Borer (<i>Chilo partellus</i>)		Tmax: 30–35°C RH: 70–80% Frequent light rain (Early vegetative to tasseling)															
	Fall Armyworm (<i>Spodoptera frugiperda</i>)		Tmax: 28–34°C RH: 70–80% Sudden showers after dry spells (Emergence to cob formation)															
	Turcicum Leaf Blight (<i>Exserohilum turcicum</i>)		Tmax: 20–30°C RH >90% Frequent fog or dew (Vegetative to reproductive)															
	Downy Mildew		Tmax: 22–28°C RH >90% Cloudy, wet spells (Seedling stage)															
	Stem Borer (<i>Chilo partellus</i>)		Tmax: 30–35°C RH: 70–80% Frequent light rain (Early vegetative to tasseling)															


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

Climatic Normal	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 Normal		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 (<i>Helicoverpa armigera</i>)	Tmax: 25–30°C - Low to moderate rainfall - RH: 40–60% - Bright sunny days (Flowering to pod development stage (60–110 DAS))																			
	Grey Mould (<i>Botrytis cinerea</i>)	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 Normal	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 (<i>Phytophthora infestans</i>)		Tmax: 18–22°C - RH: >90% - Cloudy, humid, and rainy weather (Tuber initiation to bulking)																	
	Early Blight (<i>Alternaria solani</i>)		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)																	

Crop-weather calendar of Groundnut (*Arachis hypogaea* L.)






Climatic Normal	Crop- Month	Groundnut (Kharif)					Duration – 120- 130 (Days)																			
		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 (⁰ 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 (⁰ 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																										
	Weather Parameter	Sowing to Emergence					Vegetative Growth				Flowering & Pegging				Pod Development				Seed Filling				Maturity			
	Tmax (⁰ c)	28–32°C					28–32°C				26–30°C				25–30°C				24–28°C				28–32°C			
	Tmin (⁰ c)	20–24°C					22–25°C				22–24°C				20–22°C				18–22°C				18–22°C			
	RHm(%)	85–90%					80–85%				75–80%				70–80%				65–75%				60–70%			
	RHe(%)	70–75%					65–70%				60–70%				55–65%				50–60%				45–55%			
	SS (hr./day)	5–6 hrs					6–7 hrs				6–7 hrs				7–8 hrs				8 hrs				8–9 hrs			
	Rainfall (mm)	30–50 mm					25–40 mm				20–30 mm				15–25 mm				5–10 mm				<5 mm (dry needed)			
	Congenial weather for pest/diseases	Leaf Miner		Tmax: 28–32°C RH: 70–80% Intermittent showers (Vegetative to flowering)																						
White Grub		Tmax: 28–35°C Moist soils, cloudy weather (Sowing to early pegging)																								
Tikka Leaf Spot		RH >85% Tmax: 26–30°C Cloudy, moist conditions (Vegetative to pod filling)																								
Collar Rot / Stem Rot		Soil temp: 28–32°C Waterlogging or poorly drained soil (Germination to early pegging)																								
Rust (<i>Puccinia arachidis</i>)		RH: 80–90% Temp: 25–30°C Foggy/cloudy mornings (Flowering to seed filling)																								

Crop-weather calendar of Groundnut (*Arachis hypogaea* L.)

Climatic Normal	Crop- Groundnut (Zaid)												Duration – 80-85 (Days)				
	Month	February			March				April				May				
	Std. week	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Tmax (⁰ c)	26.7	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
	Tmin (⁰ c)	11.1	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
	RHm(%)	83	87	83	73	78	75	67	50	52	41	42	36	63	48	58	45
	RHe(%)	50	45	51	40	36	37	31	20	28	21	18	16	39	20	33	19
	SS (hr./day)	8.0	7.1	8.0	7.1	5.8	5.9	7.3	8.8	8.3	7.6	7.0	6.9	10.7	9.8	9.9	9.5
	Rain(mm/week)	0.0	0.0	0.0	0.0	6.4	11.6	39.2	0.0	0.0	0.0	14.6	75.8	0.0	0.0	9.0	0.8
																	
Phenophase wise weather for better yield	Sowing to Emergence		Vegetative Growth			Flowering & Pegging			Pod Development			Seed Filling			Maturity		
Tmax (⁰ c)	32–36°C		34–38°C			30–35°C			30–34°C			28–32°C			32–36°C		
Tmin (⁰ c)	20–24°C		22–26°C			22–25°C			20–24°C			18–22°C			20–24°C		
RHm(%)	60–70%		55–65%			60–70%			55–65%			50–60%			45–55%		
RHe(%)	40–50%		35–45%			40–50%			35–45%			30–40%			25–35%		
SS (hr./day)	8–9		9–10			8–9			8–9			9–10			10–11		
Rainfall (mm)	10–15 mm		5–10 mm			5–10 mm			2–5 mm			<5 mm			Nil		
Congenial weather for pest/diseases	Leaf Miner	Tmax: 30–38°C RH: 55–70% Bright sunny days with occasional humidity (Vegetative to flowering)															
	White Grub / Cutworm	Moist soils after irrigation or summer rain Temp: 30–35°C (Sowing to early pegging)															
	Tikka Leaf Spot	Tmax: 28–32°C RH: >70% Intermittent irrigation or summer showers (Vegetative to pod development)															
	Rust (Puccinia)	RH >75% Warm humid conditions during late flowering and seed filling (Flowering to seed filling)															

Crop-weather calendar of Black Gram (*Vigna mungo*)


Climatic Normal	Crop- Black Gram (Kharif)										Duration – 95-100 (Days)				
	Month	July			August				September				October		
	Std. week	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	Tmax (°c)	26.7	26.2	25.5	26.4	30.0	30.8	35.8	37.4	38.8	39.0	40.1	39.7	35.4	31.7
	Tmin (°c)	11.1	11.6	13.5	10.8	13.3	14.0	20.0	18.6	20.6	23.0	22.0	21.2	20.5	17.3
	RHm(%)	83	87	83	73	78	75	67	50	52	41	42	36	77	83
	RHe(%)	50	45	51	40	36	37	31	20	28	21	18	16	42	42
	SS (hr./day)	8.0	7.1	8.0	7.1	5.8	5.9	7.3	8.8	8.3	7.6	7.0	6.9	9.1	7.5
	Rain(mm/week)	0.0	0.0	0.0	0.0	6.4	11.6	39.2	0.0	0.0	0.0	14.6	75.8	0.0	3.4


Phenophase wise weather for better yield	Sowing to Emergence	Vegetative Growth	Flowering	Pod Formation	Seed Development	Maturity
Tmax (°c)	28–32°C	30–34°C	28–32°C	26–30°C	25–30°C	28–32°C
Tmin (°c)	22–25°C	22–26°C	22–24°C	20–22°C	20–22°C	22–24°C
RHm(%)	85–90%	80–85%	85–90%	80–85%	75–80%	70–75%
RHe(%)	70–80%	65–75%	70–80%	65–75%	60–70%	55–65%
SS (hr./day)	4–5	3–5	4–5	5–6	6–7	7–8
Rainfall (mm)	40–60 mm	30–50 mm	20–30 mm	15–25 mm	10–20 mm	<10 mm

Congenial weather for pest/diseases	Whitefly (YMV vector)	Tmax: 28–35°C RH: 60–70% Dry spells during rainy season (Any stage)
	Thrips & Aphids	Tmax: 28–32°C RH: 65–80% Intermittent rains (Vegetative to flowering)
	Cercospora Leaf Spot	RH >85% Leaf wetness >10 hrs Tmax: 26–30°C (Vegetative to pod filling)
	Powdery Mildew	Warm days + humid nights Tmax: 28–32°C (Pod filling to maturity)
	Root Rot / Collar Rot	Saturated soil, poor drainage Temp: 28–32°C (Sowing to early growth)


Crop-weather calendar of Black Gram (*Vigna mungo*)

Climatic Normal	Crop- Black Gram (Zaid)								Duration – 75-80 (Days)				
	Month	February			March				April				
	Std. week	7	8	9	10	11	12	13	14	15	16	17	18
	Tmax (°c)	26.7	26.2	25.5	26.4	30.0	30.8	35.8	37.4	38.8	39.0	40.1	39.7
	Tmin (°c)	11.1	11.6	13.5	10.8	13.3	14.0	20.0	18.6	20.6	23.0	22.0	21.2
	RHm(%)	83	87	83	73	78	75	67	50	52	41	42	36
	RHe(%)	50	45	51	40	36	37	31	20	28	21	18	16
	SS (hr./day)	8.0	7.1	8.0	7.1	5.8	5.9	7.3	8.8	8.3	7.6	7.0	6.9
	Rain(mm/week)	0.0	0.0	0.0	0.0	6.4	11.6	39.2	0.0	0.0	0.0	14.6	75.8
													
Phenophase wise weather for better yield	Sowing to Emergence		Vegetative Growth		Flowering		Pod Formation		Seed Development		Maturity		
Tmax (°c)	32–36°C		34–38°C		32–36°C		30–34°C		30–34°C		34–38°C		
Tmin (°c)	20–24°C		22–26°C		22–25°C		20–24°C		20–22°C		22–26°C		
RHm(%)	60–70%		55–65%		60–70%		55–65%		50–60%		45–55%		
RHe(%)	40–50%		35–45%		40–50%		35–45%		30–40%		25–35%		
SS (hr./day)	8–9		9–10		8–9		8–9		9–10		10–11		
Rainfall (mm)	10–20 mm		5–10 mm		5–10 mm		5–10 mm		<5 mm		Nil		
Congenial weather for pest/diseases	Whitefly		Tmax: 32–38°C RH: 50–60% Dry weather (Vegetative to flowering)										
	Thrips & Aphids		Tmax: 30–35°C RH: 60–70% Moist but not rainy conditions (Vegetative to pod formation)										
	YMV (Yellow Mosaic Virus)		Spread by whitefly; hot and dry conditions High during 30–38°C Tmax & low RH (Any stage)										
	Powdery Mildew		Tmax: 28–32°C RH >70% Dry days followed by light showers (Pod development to maturity)										
	Cercospora Leaf Spot		Tmax: 28–34°C RH >80% Cloudy weather + high leaf wetness (Vegetative to pod formation)										

Crop-weather calendar of Green Gram (*Vigna radiata* L.)

Climatic Normal	Crop- Green Gram (Kharif)										Duration – 70-75 (Days)				
	Month	July		August				September			October				
	Std. week	30	31	32	33	34	35	36	37	38	39	40	41	42	43
	Tmax (°c)	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
	Tmin (°c)	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
	RHm(%)	80	88	81	81	87	80	82	92	87	85	82	77	83	83
	RHe(%)	57	73	65	70	79	64	67	72	69	56	58	42	42	37
	SS (hr./day)	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
	Rain(mm/week)	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
															
Phenophase wise weather for better yield	Sowing to Emergence		Vegetative Growth		Flowering		Pod Formation		Seed Filling		Maturity				
Tmax (°c)	28–32°C		30–34°C		28–32°C		26–30°C		26–30°C		30–34°C				
Tmin (°c)	22–25°C		22–26°C		22–24°C		20–22°C		20–22°C		22–24°C				
RHm(%)	85–90%		80–85%		85–90%		80–85%		75–80%		70–75%				
RHe(%)	70–80%		65–75%		70–80%		65–75%		60–70%		55–65%				
SS (hr./day)	4–5		3–5		4–5		5–6		6–7		7–8				
Rainfall (mm)	40–60 mm		30–50 mm		20–30 mm		15–25 mm		10–20 mm		<10 mm				
Congenial weather for pest/diseases	Whitefly (YMV vector)		Tmax: 30–35°C RH: 60–70% Dry breaks during monsoon (Any stage)												
	Thrips & Aphids		Tmax: 28–32°C RH: 65–75% Cloudy, humid weather (Vegetative to flowering)												
	Powdery Mildew		Tmax: 25–30°C RH >70% Dry days + high humidity (Pod development to maturity)												
	Cercospora Leaf Spot		RH >85% Leaf wetness >10 hrs Cloudy spells (Vegetative to pod formation)												
	Root Rot		Poorly drained soils High rainfall + high temp (28–32°C) (Sowing to early growth)												

Crop-weather calendar of Green Gram (*Vigna radiata* L.)

Climatic Normal	Crop- Greem Gram (Zaid)			Duration – 65-70 (Days)							
	Month	February			March				April		
	Std. week	11	12	13	14	15	16	17	18	19	20
	Tmax (°c)	30.0	30.8	35.8	37.4	38.8	39.0	40.1	39.7	36.9	43.0
	Tmin (°c)	13.3	14.0	20.0	18.6	20.6	23.0	22.0	21.2	25.2	26.4
	RHm(%)	78	75	67	50	52	41	42	36	63	48
	RHe(%)	36	37	31	20	28	21	18	16	39	20
	SS (hr./day)	8.1	7.6	6.8	6.5	6.9	7.7	8.2	9.0	7.5	8.4
	Rain(mm/week)	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
											
Phenophase wise weather for better yield	Sowing to Emergence		Vegetative Growth		Flowering		Pod Formation		Seed Filling		Maturity
Tmax (°c)	32–36°C		34–38°C		32–36°C		30–34°C		28–32°C		34–38°C
Tmin (°c)	20–24°C		22–26°C		22–24°C		20–22°C		18–22°C		22–26°C
RHm(%)	55–65%		50–60%		55–65%		50–60%		45–55%		40–50%
RHe(%)	35–45%		30–40%		35–45%		30–40%		25–35%		20–30%
SS (hr./day)	8–9		9–10		8–9		9–10		9–10		10–11
Rainfall (mm)	5–15 mm (mostly irrigated crop)		5–10 mm		5–10 mm		<5 mm		<5 mm		Nil
Congenial weather for pest/diseases	Whitefly (YMV vector)		Tmax: 32–38°C RH: 40–60% Dry, warm conditions (Any stage)								
	Thrips & Aphids		Tmax: 30–35°C RH: 55–65% Cloudy + humid weather after irrigation (Vegetative to flowering)								
	Powdery Mildew		Tmax: 28–32°C High day temp + cool nights + low RH (Pod formation to maturity)								
	Cercospora Leaf Spot		RH >65% Warm, humid spells (especially under irrigation) (Vegetative to pod development)								
	Root Rot		Soil temp: >30°C Poor drainage or excess irrigation (Early stages)								

Crop-weather calendar of Sesame (*Sesamum indicum* L.)

Climatic Normal	Crop- Sesame (Till)							Duration – 90-100 (Days)								
	Month	July					August				September				October	
	Std. week	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
	Tmax (°c)	33.3	33.9	26.7	26.2	25.5	26.4	30.0	30.8	35.8	37.4	38.8	39.0	40.1	39.7	35.4
	Tmin (°c)	26.5	26.0	11.1	11.6	13.5	10.8	13.3	14.0	20.0	18.6	20.6	23.0	22.0	21.2	20.5
	RHm(%)	92	92	83	87	83	73	78	75	67	50	52	41	42	36	77
	RHe(%)	68	71	50	45	51	40	36	37	31	20	28	21	18	16	42
	SS (hr./day)	3.0	2.2	8.0	7.1	8.0	7.1	5.8	5.9	7.3	8.8	8.3	7.6	7.0	6.9	9.1
	Rain(mm/week)	40.6	47.4	0.0	0.0	0.0	0.0	6.4	11.6	39.2	0.0	0.0	0.0	14.6	75.8	0.0



Phenophase wise weather for better yield	Sowing to Emergence	Vegetative Growth	Flowering	Capsule Formation	Seed Maturity
Tmax (°c)	30–35°C	32–38°C	30–34°C	28–32°C	28–32°C
Tmin (°c)	22–26°C	24–28°C	24–26°C	22–24°C	20–24°C
RHm(%)	70–80%	65–75%	70–80%	65–75%	60–70%
RHe(%)	60–70%	55–65%	60–70%	55–65%	50–60%
SS (hr./day)	6–7	7–9	6–7	7–8	8–9
Rainfall (mm)	30–40 mm	25–35 mm	15–25 mm	10–15 mm	<10 mm
Congenial weather for pest/diseases	Leaf Roller & Capsule Borer	Tmax: 30–35°C RH: 60–70% Intermittent rainfall (Flowering to capsule stage)			
	Gall Fly	Tmax: 28–32°C RH >75% Moist conditions (Vegetative to flowering)			
	Phyllody (Mycoplasma)	Spread by leafhopper under warm and dry conditions (Any stage (appears at flowering))			
	Alternaria Leaf Spot	RH >80% Prolonged leaf wetness Temp: 25–30°C (Vegetative to flowering)			
	Bacterial Blight	RH >85% Rain splashes + wounds (Pod development)			
	Leaf Roller & Capsule Borer	Tmax: 30–35°C RH: 60–70% Intermittent rainfall (Flowering to capsule stage)			



Crop Weather Calendar of Auraiya District, 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


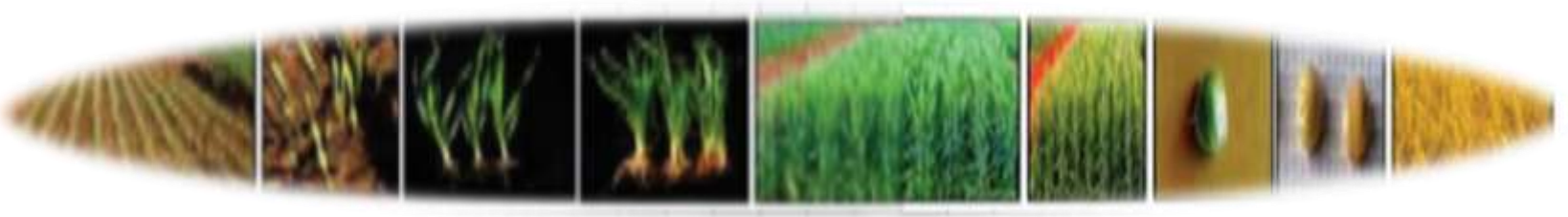

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur (U.P.)

Under Gramin Krishi Mausam Sewa (GKMS), AMFU Kanpur & AICRP on Agrometeorology

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

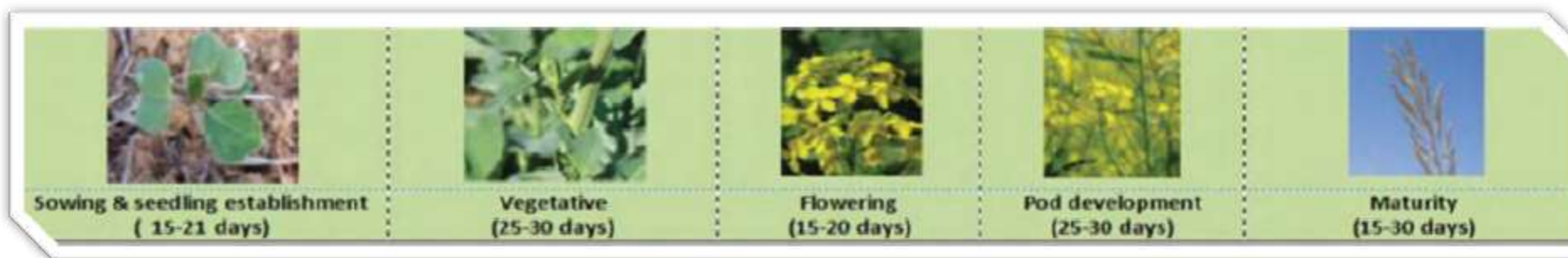
Climatic Normal	Crop- Rice						Duration –120- 135 (Days)																		
	Month	June					July				August					September				October					
	Std. week	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45		
	Tmax (°c)	32.4	31.6	31.1	30.9	30.8	30.7	31.0	31.2	31.4	30.8	30.9	31.2	31.0	30.8	30.7	30.2	30.7	30.2	30.1	29.2	28.8	28.5		
	Tmin (°c)	23.7	23.8	23.9	23.9	24.0	24.0	24.1	24.2	24.2	24.0	23.9	24.0	23.6	23.4	23.2	22.6	22.3	21.5	20.3	18.7	17.7	16.5		
	Rain(mm/week)	55.5	85.2	88.3	105.6	129.3	101.1	73.9	72.8	70.0	98.5	73.0	74.1	66.0	63.3	67.4	79.8	39.0	29.2	14.1	4.7	1.6	2.4		
	RH(%)	74.4	76.9	78.0	78.9	79.7	79.3	78.4	78.0	77.5	79.0	78.1	77.7	77.5	77.5	77.5	77.8	75.4	75.1	73.2	72.3	71.4	70.3		
Phenophase wise weather for better yield																									
		Sowing					Transplanting				Active tillering					Flowering				Grain filling				Physiological maturity	
	Tmax (°c)	32–36					30–34				28–32					26–30				25–30				24–28	
	Tmin (°c)	24–26					23–25				22–24					20–22				18–21				16–20	
	RHm(%)	80–90					85–95				85–95					90–95				80–90				70–80	
	RHe(%)	70–80					75–85				75–85					75–85				65–75				60–70	
	Rainfall (mm)	40–60					60–80				60–90					50–70				30–50				<20	
Congenial weather for pest/diseases	Seed rot, Damping off					Soil temp: 30–35°C High soil moisture Poor drainage																			
	Bacterial leaf blight, Blast, Brown spot					RH > 85% Tmax: 30–34°C Stagnant water																			
	Sheath blight, Gall midge, Leaf folder, Stem borer					RH > 85% Cloudy skies Tmax: 28–32°C																			
	Neck blast, False smut, Sheath rot					RH > 90% Frequent light rain Tmax: 26–30°C																			
	Ear head bug, Grain discoloration, Stem borer					RH: 80–90% Intermittent rain Tmax: 25–30°C																			
	Dirty panicle, Aspergillus (storage fungi)					RH > 80% Delayed harvest Foggy/cloudy days																			

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

Climatic Normal	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)	26.6	25.9	24.9	23.5	22.6	22.1	21.3	20.8	21.0	21.4	22.6	23.7	24.7	25.9	26.7	28.1	29.1	30.6	30.8	
	Tmin (°c)	13.9	12.7	11.9	10.9	10.1	9.2	9.0	8.4	8.7	9.1	9.8	10.9	11.8	12.7	13.7	14.4	15.4	16.8	17.9	
	Rain(mm/week)	0.6	0.6	0.6	1.3	0.4	1.5	1.4	1.3	3.2	2.0	2.3	1.8	2.9	2.0	2.0	1.5	1.6	2.6	5.8	
	RH(%)	70.4	69.9	70.6	72.1	72.8	72.5	73.8	74.0	73.9	73.7	72.4	71.6	71.1	70.0	69.7	67.9	67.4	66.3	67.8	
																					
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		22–26				20–25				22–26				26–30		28–32				
Tmin (°c)	12–16		10–14				8–12				10–14				12–16		14–18				
RHm(%)	75–85		70–80				65–75				70–80				60–70		50–60				
RHe(%)	60–70		60–70				55–65				60–70				50–60		40–50				
Rainfall (mm)	10–20		<10				<10				10–20				<10		Nil or <5				
Congenial weather for pest/diseases	Seed rot, Damping off	Soil temp: 24–28°C High soil moisture Poor drainage																			
	Aphids, Early blight	Tmax: 22–26°C RH: 70–80% Cool, moist mornings																			
	Leaf rust, Stripe rust, Aphids	Tmax: 20–25°C RH: 65–75% Intermittent dew or light showers																			
	Powdery mildew, Flag smut, Rusts	Tmax: 22–26°C RH > 75% Light rain & cloudy weather																			
	Root rot, Lodging (if rain), Foliar blight	Tmax: 26–30°C RH: 60–70% Dry weather preferable																			
	Grain discoloration, Ear head infection	Tmax: 28–32°C RH: 50–60% Fog or dew during maturity																			
	Seed rot, Damping off	Soil temp: 24–28°C High soil moisture Poor drainage																			

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



Climatic Normal	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)	29.2	28.8	28.5	27.3	26.6	25.9	24.9	23.5	22.6	22.1	21.3	20.8	21.0	21.4	22.6	23.7	24.7	25.9	26.7		
	Tmin (°c)	18.7	17.7	16.5	15.4	13.9	12.7	11.9	10.9	10.1	9.2	9.0	8.4	8.7	9.1	9.8	10.9	11.8	12.7	13.7		
	Rain(mm/week)	4.7	1.6	2.4	1.0	0.6	0.6	0.6	1.3	0.4	1.5	1.4	1.3	3.2	2.0	2.3	1.8	2.9	2.0	2.0		
	RH(%)	72.3	71.4	70.3	71.0	70.4	69.9	70.6	72.1	72.8	72.5	73.8	74.0	73.9	73.7	72.4	71.6	71.1	70.0	69.7		



Phenophase wise weather for better yield	Sowing & emergence	Vegetative growth	Flowering	Siliqua formation	Seed development	Maturity
Tmax (°c)	24–28	22–26	20–24	20–25	24–28	28–30
Tmin (°c)	12–16	10–14	8–12	10–14	12–16	14–18
RHm(%)	70–80	65–75	60–70	60–70	55–65	50–60
RHe(%)	60–70	55–65	50–60	50–60	45–55	40–50
Rainfall (mm)	5–10	<10	<5	<10	Nil or <5	Nil

Congenial weather for pest/diseases	Seed rot, Damping off	Soil temperature > 25°C High soil moisture Poor drainage
	Aphids, Alternaria leaf spot	Tmax: 22–26°C RH: 65–75% Moist, cloudy weather
	White rust, Powdery mildew	Tmax: 20–24°C RH: 60–70% Cloudy with dew formation
	Sclerotinia stem rot, Alternaria	Tmax: 20–25°C RH > 60% Cloudy spells or light drizzles
	Pod borer, Late Alternaria blight	Tmax: 24–28°C RH: 55–65% Dry to moderately humid
	Aspergillus, Storage fungi	Tmax: 28–30°C RH < 50% Fog or delayed harvest

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

Climatic Normal	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)	29.2	28.8	28.5	27.3	26.6	25.9	24.9	23.5	22.6	22.1	21.3	20.8	21.0	21.4	22.6	23.7	24.7	25.9	26.7	
	Tmin (°c)	18.7	17.7	16.5	15.4	13.9	12.7	11.9	10.9	10.1	9.2	9.0	8.4	8.7	9.1	9.8	10.9	11.8	12.7	13.7	
	Rain(mm/week)	4.7	1.6	2.4	1.0	0.6	0.6	0.6	1.3	0.4	1.5	1.4	1.3	3.2	2.0	2.3	1.8	2.9	2.0	2.0	
	RH(%)	72.3	71.4	70.3	71.0	70.4	69.9	70.6	72.1	72.8	72.5	73.8	74.0	73.9	73.7	72.4	71.6	71.1	70.0	69.7	
																					
Phenophase wise weather for better yield	Sowing & emergence		Vegetative growth			Flowering			Tuber Initiation			Tuber Bulking			Maturity						
Tmax (°c)	24–28		20–26			20–25			18–22			20–24			24–28						
Tmin (°c)	12–16		10–14			10–12			10–12			10–14			12–16						
RHm(%)	75–85		80–90			80–85			85–90			80–85			65–75						
RHe(%)	65–75		70–80			65–75			70–80			65–70			55–65						
Rainfall (mm)	5–10		<10			<5			<10			<10			Nil or <5						
Congenial weather for pest/diseases	Seed rot, Damping off		Soil temp: 24–28°C High soil moisture Poor drainage																		
	Early blight, Cutworms, Aphids		Tmax: 20–26°C RH > 85% Cloudy & moist weather																		
	Late blight, Whiteflies		Tmax: 20–25°C RH: 80–85% Dew or light drizzle																		
	Late blight, Root-knot nematodes		Tmax: 18–22°C RH > 90% Overcast + drizzles																		
	Rhizoctonia (black scurf), Aphids		Tmax: 20–24°C RH: 80–85% Intermittent irrigation																		
	Soft rot, Dry rot (storage fungi)		Tmax: 24–28°C RH: 65–75% Dry, warm days																		



Crop Weather Calendar of Kannauj District, 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), AMFU Kanpur & AICRP on Agrometeorology







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

Climatic Normal	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)	39.1	37.9	36.3	35.7	34.3	33.9	33.3	33.2	33.2	32.8	33.1	33.4	33.2	33.1	33.2	33.5	33.6	33.6	32.8	32.1	31.3	30.3		
	Tmin (°c)	27.5	27.1	26.8	26.7	26.3	26.1	26.0	25.9	26.0	25.7	25.5	25.7	25.2	24.9	24.6	23.6	22.8	21.3	19.5	17.9	16.6	15.4		
	Rain(mm/week)	1.6	3.3	5.6	5.0	8.4	7.1	7.2	5.6	5.4	8.4	5.8	4.7	6.4	6.6	3.9	1.2	1.7	0.8	0.3	0.1	0.0	0.0		
	RH(%)	58.2	61.5	66.1	67.7	71.8	72.6	74.0	73.7	73.9	75.0	73.4	72.5	72.5	72.4	70.6	67.3	65.5	62.4	61.1	60.2	59.9	60.5		
Phenophase wise weather for better yield																									
	Tmax (°c)	30–34					28–32				30–33					28–32				27–31				25–30	
	Tmin (°c)	24–26					23–25				23–25					22–24				20–22				18–20	
	RHm(%)	70–80					80–85				80–85					85–90				80–85				70–75	
	RHe(%)	55–65					65–70				65–70					70–75				65–70				55–60	
	Rainfall (mm)	100–150					150–200				120–150					100–120				80–100				<50	
	Congenial weather for pest/diseases	Stem borer					28–35 °C, RH 80–90%, cloudy weather with intermittent rain																		
Gundhi bug					25–30 °C, RH 60–75%, dry to cloudy weather with little rain																				
Leaf folder / Leaf roller					30–35 °C, RH >85%, cloudy & humid weather																				
Brown planthopper (BPH)					28–32 °C, RH >80%, cloudy weather, waterlogged fields																				
Sheath blight (Rhizoctonia solani)					Tmin 20–25 °C, RH >90%, continuous cloudy/rainy days, poor air circulation																				
Blast (Pyricularia oryzae)					20–28 °C, RH >85%, cloudy weather with drizzles, high N-fertilizer																				
Bacterial leaf blight (BLB)					25–34 °C, RH >80%, intermittent rains & strong winds																				
False smut					25–30 °C, RH >90%, cloudy & humid weather, intermittent rain																				


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

Climatic Normal	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)	28.0	27.0	25.9	24.2	23.1	21.7	20.0	20.7	20.8	22.3	23.5	24.3	25.8	27.6	28.4	29.9	31.3	33.8	35.4
	Tmin (°c)	12.7	11.6	10.5	9.8	8.7	7.9	7.8	7.5	8.0	8.4	9.3	10.3	11.4	12.3	13.2	14.2	15.5	17.1	18.4
	Rain(mm/week)	0.1	0.1	0.0	0.2	0.0	0.2	0.4	0.2	0.6	0.4	0.2	0.9	0.6	0.3	0.7	0.2	0.3	0.2	0.1
	RH(%)	62.0	63.2	64.4	67.9	69.0	71.7	76.4	73.9	74.5	71.0	69.0	68.6	66.6	62.8	62.2	59.4	57.6	53.4	51.4
																				
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)	22–26						18–22		20–24		22–26				26–30		28–32			
Tmin (°c)	8–12						6–8		8–10		10–12				12–15		14–16			
RHm(%)	65–70						70–75		65–70		60–65				55–60		50–55			
RHe(%)	50–55						55–60		50–55		45–50				40–45		35–40			
Rainfall (mm)	20–30						10–20		20–30		20–25				10–15		<10			
Congenial weather for pest/diseases	Brown rust (<i>Puccinia recondita</i>)						18–22 °C, RH >80%, cloudy weather, light rain/dew													
	Yellow rust (<i>Puccinia striiformis</i>)						10–15 °C, high RH (>85%), cloudy & moist conditions													
	Karnal bunt (<i>Tilletia indica</i>)						18–24 °C, RH 70–80%, cloudy weather with intermittent rain													
	Loose smut (<i>Ustilago tritici</i>)						16–22 °C, RH 70–80%, cloudy weather at flowering													
	Powdery mildew (<i>Erysiphe graminis</i>)						15–20 °C, RH 60–70%, cloudy & dry conditions													
	Alternaria blight						20–25 °C, RH >80%, cloudy weather with light rain													
	Aphids (<i>Sitobion avenae</i> , <i>Rhopalosiphum</i> spp.)						18–25 °C, RH 65–75%, cloudy & humid weather													
	Termites						25–30 °C, dry soil conditions, sandy soils													
	Armyworm / Cutworm						20–28 °C, RH 70–80%, cloudy weather with light rain													
	Shoot fly						25–30 °C, RH 60–70%, intermittent rainfall													

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

Climatic Normal	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)	32.1	31.3	30.3	29.2	28.0	27.0	25.9	24.2	23.1	21.7	20.0	20.7	20.8	22.3	23.5	24.3	25.8	27.6	28.4	
	Tmin (°c)	17.9	16.6	15.4	14.3	12.7	11.6	10.5	9.8	8.7	7.9	7.8	7.5	8.0	8.4	9.3	10.3	11.4	12.3	13.2	
	Rain(mm/week)	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.2	0.4	0.2	0.6	0.4	0.2	0.9	0.6	0.3	0.7	
	RH(%)	60.2	59.9	60.5	61.5	62.0	63.2	64.4	67.9	69.0	71.7	76.4	73.9	74.5	71.0	69.0	68.6	66.6	62.8	62.2	
<div><div><p>Sowing & 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)	25–30		20–25			18–22			20–24			22–26			26–30						
Tmin (°c)	12–16		8–12			6–10			8–12			10–14			12–16						
RHm(%)	65–70		70–75			75–80			70–75			65–70			55–60						
RHe(%)	50–55		55–60			60–65			55–60			50–55			40–45						
Rainfall (mm)	20–30		10–20			20–30			10–20			10–15			<10						
Congenial weather for pest/diseases	Aphids (<i>Lipaphis erysimi</i>)			18–25 °C, RH 65–80%, cloudy & humid weather, dry spell after irrigation/rain																	
	Painted bug (<i>Bagrada hilaris</i>)			25–30 °C, low RH (<50%), bright sunny weather																	
	Mustard sawfly (<i>Athalia lugens proxima</i>)			20–28 °C, RH 65–75%, cloudy weather with light rains																	
	Leaf webber / Capsule borer			22–28 °C, RH 70–80%, cloudy & humid weather																	
	Alternaria blight (<i>Alternaria brassicae</i>)			18–22 °C, RH >90%, cloudy weather with intermittent rains/dew																	
	White rust (<i>Albugo candida</i>)			15–20 °C, RH >90%, cloudy & wet weather																	
	Downy mildew (<i>Peronospora parasitica</i>)			10–18 °C, RH >85%, cloudy & moist conditions																	
	Powdery mildew (<i>Erysiphe cruciferarum</i>)			18–25 °C, RH 60–70%, cloudy & dry weather																	
Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)			15–20 °C, RH >90%, prolonged cloudy & wet conditions																		

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

Climatic Normal	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)	32.1	31.3	30.3	29.2	28.0	27.0	25.9	24.2	23.1	21.7	20.0	20.7	20.8	22.3	23.5	24.3	25.8	27.6	28.4	
	Tmin (°c)	17.9	16.6	15.4	14.3	12.7	11.6	10.5	9.8	8.7	7.9	7.8	7.5	8.0	8.4	9.3	10.3	11.4	12.3	13.2	
	Rain(mm/week)	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.2	0.4	0.2	0.6	0.4	0.2	0.9	0.6	0.3	0.7	
	RH(%)	60.2	59.9	60.5	61.5	62.0	63.2	64.4	67.9	69.0	71.7	76.4	73.9	74.5	71.0	69.0	68.6	66.6	62.8	62.2	
																					
Phenophase wise weather for better yield	Sowing & emergence		Vegetative growth			Flowering			Tuber Initiation			Tuber Bulking			Maturity						
Tmax (°c)	25–30		20–24			18–22			16–20			18–22			22–26						
Tmin (°c)	12–16		8–12			6–10			4–8			6–10			8–12						
RHm(%)	65–70		70–75			75–80			80–85			75–80			65–70						
RHe(%)	50–55		55–60			60–65			65–70			60–65			50–55						
Rainfall (mm)	20–30		10–20			20–30			20–25			15–20			<10						
Congenial weather for pest/diseases	Late blight (Phytophthora infestans)			10–20 °C, RH >90%, cloudy weather with continuous dew/fog or intermittent rains																	
	Early blight (Alternaria solani)			24–30 °C, RH 70–80%, intermittent dry & wet spells																	
	Black scurf (Rhizoctonia solani)			18–22 °C, moist soil, cloudy weather																	
	Common scab (Streptomyces scabies)			20–28 °C, dry soil with low moisture, alkaline soils																	
	Brown rot / Bacterial wilt (Ralstonia solanacearum)			25–30 °C, RH >80%, poorly drained soils, high rainfall																	
	Soft rot (Erwinia spp.)			20–28 °C, RH >85%, waterlogging + warm humid conditions																	
	Potato cyst nematode (Globodera spp.)			15–20 °C, moist soils																	
	Aphids (Myzus persicae, Aphis gossypii)			18–25 °C, RH 65–80%, cloudy & humid weather																	
	Whitefly (Bemisia tabaci)			25–30 °C, RH 50–60%, dry weather																	
Cutworm / Armyworm			20–28 °C, RH 70–80%, cloudy weather with light rains																		



Crop Weather Calendar of Mainpuri District, 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)










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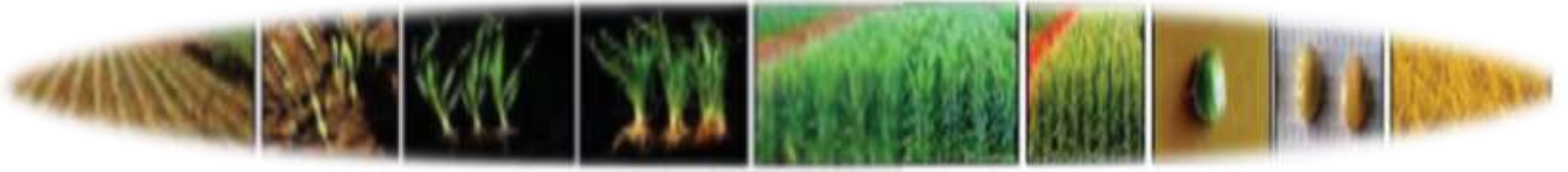

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Crop-weather calendar of Rice (*Oryza Sativa* L.)

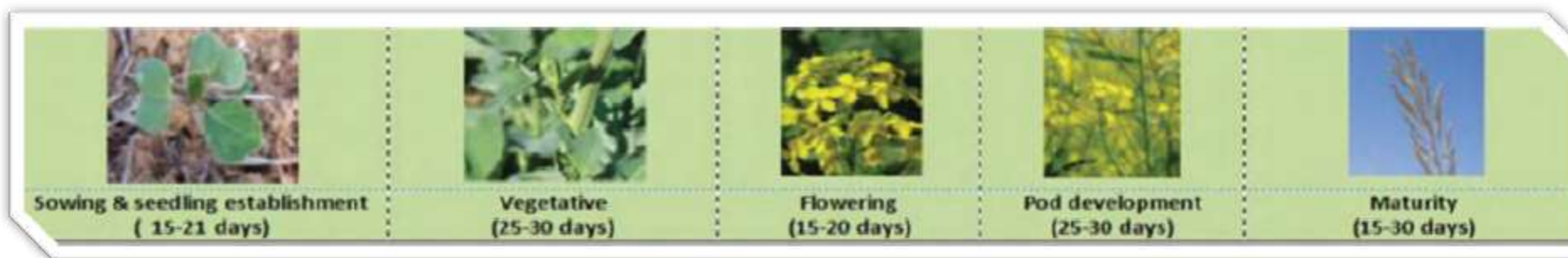
Climatic Normal	Crop- Rice					Duration –120- 135 (Days)																	
	Month	June					July				August					September				October			
	Std. week	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	Tmax (°c)	34.5	33.0	32.1	31.6	31.0	30.5	30.5	30.3	30.3	30.5	30.6	30.6	30.6	31.1	31.2	31.9	31.6	31.5	31.3	31.0	30.2	30.1
	Tmin (°c)	25.2	24.9	24.4	24.3	24.0	23.8	23.6	23.7	23.7	23.7	23.7	23.6	23.7	23.6	23.6	23.5	23.2	22.8	22.1	21.2	20.5	19.7
	Rain(mm/week)	7.9	7.4	8.6	8.8	8.9	12.6	11.2	12.7	12.0	10.6	9.2	10.8	10.2	8.6	10.2	4.7	6.3	5.6	3.1	3.2	2.2	1.5
	RH(%)	76.8	78.9	79.9	80.4	81.2	82.4	81.7	82.5	82.5	82.0	81.3	81.5	81.4	80.2	80.3	77.8	77.9	77.3	75.7	74.7	74.6	73.0
Phenophase wise weather for better yield																							
	Tmax (°c)	30–32				28–32				28–30					26–28			25–27			28–30		
	Tmin (°c)	22–24				22–25				22–24					20–22			18–20			16–18		
	RHm(%)	75–85				80–90				75–85					80–85			70–75			60–65		
	RHe(%)	65–70				65–70				60–65					65–70			55–60			50–55		
	Rainfall (mm)	40–60				80–120				60–80					70–90			30–40			<10		
	Congenial weather for pest/diseases	Stem borer					Tmax: 28–35 °C – High humidity: 80–90% – Cloudy weather with intermittent rain <i>Vegetative to panicle initiation (Tillering to Booting stage)</i>																
Gundhi bug					Tmax: 25–30 °C – RH: 60–75% – Dry, cloudy weather with little rain <i>Flowering to dough stage</i>																		
Leaf roller					Tmax: 30–35 °C – High RH (>85%) – Cloudy, humid weather <i>Tillering to early panicle emergence</i>																		
Sheath blight (Rhizoctonia solani)					Tmin: 20–25 °C – RH >90% – Continuous cloudy/rainy days – Poor air circulation <i>Tillering to heading</i>																		
	Blast (Leaf/Neck blast)					Tmax: 25–28 °C, Tmin: 20–22 °C – RH >85% – Intermittent drizzles & cloudy weather <i>Nursery, tillering & flowering stages</i>																	
	Bacterial Leaf Blight (BLB)					Tmax: 28–34 °C – RH: 70–80% – High rainfall, stormy winds, cloudy weather <i>Tillering to flowering stage</i>																	
	False smut					Tmax: 25–30 °C – RH: >85% – Cloudy, humid conditions with intermittent rain <i>Panicle initiation to grain filling</i>																	

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

Climatic Normal	Crop- Wheat (Timely sown)																				
	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)	29.6	29.2	28.7	28.5	27.8	27.8	27.8	28.0	28.5	28.9	29.5	30.2	31.0	32.1	32.7	33.2	33.8	34.9	35.2	
	Tmin (°c)	18.1	16.7	16.2	16.1	15.1	14.7	14.8	15.0	15.3	15.9	16.3	17.2	18.0	18.7	19.3	20.4	21.1	21.9	22.9	
	Rain(mm/week)	0.7	0.1	0.4	0.2	0.8	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.4	0.8	
	RH(%)	70.6	68.6	68.5	68.6	68.0	67.2	67.5	67.4	67.0	67.4	67.0	67.5	67.7	67.1	67.0	68.2	68.6	68.2	69.6	
																					
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)	22–25		18–22				20–24				22–26				26–30		28–32				
Tmin (°c)	10–12		8–10				8–12				10–14				12–16		14–18				
RHm(%)	70–80		75–85				70–80				65–75				55–65		50–60				
RHe(%)	60–65		65–70				60–65				55–60				45–50		40–45				
Rainfall (mm)	20–30		10–20				15–25				10–15				<10		Nil				
Congenial weather for pest/diseases	Brown rust (<i>Puccinia recondita</i>)		Tmax: 18–25 °C, Tmin: 8–12 °C, RH >70%, cloudy & moist with dew																		
	Yellow rust (<i>Puccinia striiformis</i>)		Tmax: 10–15 °C, Tmin: 5–8 °C, RH >80%, cloudy & wet																		
	Black rust (<i>Puccinia graminis</i>)		Tmax: 25–30 °C, RH 60–70%, clear warm days after cool nights																		
	Powdery mildew (<i>Erysiphe graminis</i>)		Tmax: 15–20 °C, RH 70–80%, cloudy & humid with poor air circulation																		
	Karnal bunt (<i>Tilletia indica</i>)		Tmax: 18–24 °C, RH 80–90%, cloudy with light rain/high soil moisture																		
	Loose smut (<i>Ustilago tritici</i>)		Cool moist weather, Tmin: 10–15 °C, RH >80%																		
	Aphids (<i>Sitobion avenae</i>)		18–25 °C, RH 65–75%, cloudy & humid																		
Termites		Warm, dry weather with low soil moisture																			

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

Climatic Normal	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)	31.0	30.2	30.1	29.7	29.6	29.2	28.7	28.5	27.8	27.8	27.8	28.0	28.5	28.9	29.5	30.2	31.0	32.1	32.7	
	Tmin (°c)	21.2	20.5	19.7	18.7	18.1	16.7	16.2	16.1	15.1	14.7	14.8	15.0	15.3	15.9	16.3	17.2	18.0	18.7	19.3	
	Rain(mm/week)	3.2	2.2	1.5	1.1	0.7	0.1	0.4	0.2	0.8	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.3	0.3	0.3	
	RH(%)	74.7	74.6	73.0	71.7	70.6	68.6	68.5	68.6	68.0	67.2	67.5	67.4	67.0	67.4	67.0	67.5	67.7	67.1	67.0	



Phenophase wise weather for better yield	Sowing & emergence	Vegetative growth	Flowering	Siliqua formation	Seed development	Maturity
Tmax (°c)	22–25	18–22	16–20	18–22	22–26	28–32
Tmin (°c)	10–12	6–10	5–8	6–10	8–12	12–16
RHm(%)	70–80	70–75	75–85	65–75	60–70	55–60
RHe(%)	60–65	55–60	60–65	55–60	50–55	45–50
Rainfall (mm)	20–30	10–15	10–20	5–10	<10	Nil

Congenial weather for pest/diseases	Mustard aphid (<i>Lipaphis erysimi</i>)	18–25 °C, RH 65–80%, cloudy & humid weather, no rain
	Alternaria blight (<i>Alternaria brassicae</i>)	18–22 °C, RH >90%, frequent cloudy days with drizzles
	White rust (<i>Albugo candida</i>)	15–20 °C, RH 80–90%, cloudy with light showers
	Powdery mildew (<i>Erysiphe cruciferarum</i>)	20–25 °C, RH 60–70%, dry & cloudy weather, poor air circulation
	Downy mildew	15–22 °C, RH >85%, cloudy & wet conditions
	Painted bug (<i>Bagrada hilaris</i>)	28–32 °C, dry weather, low soil moisture
	Stem rot (<i>Sclerotinia sclerotiorum</i>)	18–22 °C, RH >90%, prolonged cloudy/rainy weather








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

Climatic Normal	Crop- Month	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)	31.0	30.2	30.1	29.7	29.6	29.2	28.7	28.5	27.8	27.8	27.8	28.0	28.5	28.9	29.5	30.2	31.0	32.1	32.7
	Tmin (°c)	21.2	20.5	19.7	18.7	18.1	16.7	16.2	16.1	15.1	14.7	14.8	15.0	15.3	15.9	16.3	17.2	18.0	18.7	19.3
	Rain(mm/week)	3.2	2.2	1.5	1.1	0.7	0.1	0.4	0.2	0.8	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.3	0.3	0.3
	RH(%)	74.7	74.6	73.0	71.7	70.6	68.6	68.5	68.6	68.0	67.2	67.5	67.4	67.0	67.4	67.0	67.5	67.7	67.1	67.0




Phenophase wise weather for better yield	Sowing & emergence	Vegetative growth	Flowering	Tuber Initiation	Tuber Bulking	Maturity
Tmax (°c)	22–25	20–24	18–22	16–20	18–22	24–28
Tmin (°c)	12–15	10–12	8–10	7–9	8–10	10–12
RHm(%)	75–80	70–80	75–85	80–90	75–85	60–70
RHe(%)	60–65	60–65	65–70	65–70	60–65	50–55
Rainfall (mm)	20–30	10–20	10–15	10–20	<10	Nil
Congenial weather for pest/diseases	Late blight (<i>Phytophthora infestans</i>)		Tmax: 18–22 °C, Tmin: 7–10 °C – RH >90% – Continuous cloudy/rainy weather with dew			
	Early blight (<i>Alternaria solani</i>)		24–28 °C – Moderate RH (70–80%) – Warm, humid conditions with intermittent rain			
	Black scurf & stem canker (<i>Rhizoctonia solani</i>)		Cool (15–20 °C), moist soil – High soil moisture at planting			
	Bacterial wilt (<i>Ralstonia solanacearum</i>)		28–32 °C – RH 80–90% – High rainfall & poorly drained soils			
	Common scab (<i>Streptomyces scabies</i>)		20–25 °C – Dry soil with low moisture during tuber formation			
	Potato virus diseases (PVY, PLRV)		15–25 °C – Spread favored by aphid activity in cool, humid weather			
	Aphids (<i>Myzus persicae</i> , <i>Aphis gossypii</i>)		18–25 °C – RH 65–80% – Cloudy, humid weather			
	Cutworms (<i>Agrotis</i> spp.)		20–28 °C – Dry weather followed by light rain			
	White grub / Soil pests		Warm (25–30 °C), moist soil			

Crop-weather calendar of Groundnut (*Arachis hypogaea* L.)

Climatic Normal	Crop- Month	Groundnut (Kharif)					Duration – 120- 130 (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 (⁰ c)	34.5	33.0	32.1	31.6	31.0	30.5	30.5	30.3	30.3	30.5	30.6	30.6	30.6	31.1	31.2	31.9	31.6	31.5	31.3	31.0	30.2	30.1							
	Tmin (⁰ c)	25.2	24.9	24.4	24.3	24.0	23.8	23.6	23.7	23.7	23.7	23.7	23.6	23.7	23.6	23.6	23.5	23.2	22.8	22.1	21.2	20.5	19.7							
	Rain(mm/week)	7.9	7.4	8.6	8.8	8.9	12.6	11.2	12.7	12.0	10.6	9.2	10.8	10.2	8.6	10.2	4.7	6.3	5.6	3.1	3.2	2.2	1.5							
	RH (%)	76.8	78.9	79.9	80.4	81.2	82.4	81.7	82.5	82.5	82.0	81.3	81.5	81.4	80.2	80.3	77.8	77.9	77.3	75.7	74.7	74.6	73.0							
Phenophase wise weather for better yield																														
	Weather Parameter	Sowing to Emergence					Vegetative Growth				Flowering & Pegging					Pod Development					Seed Filling					Maturity				
	Tmax (⁰ c)	28–32					28–30				26–30					27–31					28–32					30–34				
	Tmin (⁰ c)	20–22					20–22				20–22					20–23					18–20					16–18				
	RHm(%)	75–85					70–80				75–85					70–80					65–75					55–65				
	RHe(%)	65–70					60–65				65–70					55–60					50–55					45–50				
	SS (hr./day)	4–5					5–6				6–7					6–7					7–8					8–9				
	Rainfall (mm)	60–80					80–100				90–120					70–90					40–60					<20				
	Congenial weather for pest/diseases	Leaf spot (Early & Late) (<i>Cercospora spp.</i>)		25–30 °C, RH >85%, cloudy weather with intermittent rains																										
Rust (<i>Puccinia arachidis</i>)		23–28 °C, RH >80%, frequent dew & cloudy weather																												
Collar rot (<i>Aspergillus niger</i>)		28–32 °C, dry soil conditions after sowing – low soil moisture																												
Aflatoxin contamination (<i>Aspergillus flavus</i>)		28–32 °C, RH 65–75%, drought stress followed by rain at maturity																												
Stem rot / Sclerotium wilt (<i>Sclerotium rolfsii</i>)		25–30 °C, RH >85%, high soil moisture & continuous rain																												
White grub (<i>Holotrichia spp.</i>)		25–30 °C, moist soil after early rains																												
Termites		28–32 °C, dry spells & low soil moisture																												
Aphids (<i>Aphis craccivora</i>)		20–28 °C, RH 70–80%, cloudy weather																												
Jassids (<i>Empoasca kerri</i>)		26–30 °C, moderate humidity (60–70%), cloudy & humid weather																												
Spodoptera (Leaf-eating caterpillar)		25–30 °C, RH 70–80%, continuous cloudy weather																												

Crop-weather calendar of Groundnut (*Arachis hypogaea* L.)

Climatic Normal	Crop- Groundnut (Zaid)												Duration – 80-85 (Days)				
	Month	February			March				April				May				
	Std. week	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Tmax (°c)	31.0	32.1	32.7	33.2	33.8	34.9	35.2	35.7	36.0	36.4	36.8	37.1	37.4	37.6	38.0	37.5
	Tmin (°c)	18.0	18.7	19.3	20.4	21.1	21.9	22.9	23.5	23.9	24.5	24.8	25.3	25.8	25.9	26.4	26.2
	Rain(mm/week)	0.3	0.3	0.3	0.6	0.6	0.4	0.8	1.4	1.1	1.5	1.7	1.9	2.4	2.0	2.6	2.7
	RH (%)	67.7	67.1	67.0	68.2	68.6	68.2	69.6	70.0	70.1	70.6	70.6	71.0	71.5	71.2	71.6	72.1
																	
Phenophase wise weather for better yield	Sowing to Emergence		Vegetative Growth		Flowering & Pegging			Pod Development			Seed Filling			Maturity			
Tmax (°c)	30–34		32–36		30–34			32–36			30–34			32–36			
Tmin (°c)	18–20		20–22		20–22			22–24			22–24			24–26			
RHm(%)	60–70		55–65		60–70			55–65			60–70			55–60			
RHe(%)	45–50		40–45		45–50			40–45			45–50			40–45			
SS (hr./day)	8–9		9–10		8–9			9–10			7–8			8–9			
Rainfall (mm)	20–30		30–40		40–60 (with irrigation support)			30–40			50–70 (early monsoon showers help)			<20			
Congenial weather for pest/diseases	Leaf spot (Cercospora spp.)		25–30 °C, RH >85%, cloudy/humid weather, intermittent irrigation or showers														
	Rust (Puccinia arachidis)		23–28 °C, RH >80%, frequent dew deposition, cloudy weather														
	Collar rot (Aspergillus niger)		28–32 °C, dry soil after sowing, low soil moisture stress														
	Aflatoxin contamination (Aspergillus flavus)		28–32 °C, RH 65–75%, drought stress followed by irrigation or pre-monsoon rain														
	Stem rot / Sclerotium wilt (Sclerotium rolfsii)		25–30 °C, RH >85%, heavy irrigation or continuous moist soil														
	White grub (Holotrichia spp.)		25–30 °C, moist soil after pre-monsoon showers														
	Termites		28–32 °C, prolonged dry spells, sandy soil with low moisture														
	Aphids (Aphis craccivora)		20–28 °C, RH 70–80%, cloudy humid weather														
	Jassids (Empoasca kerri)		26–30 °C, RH 60–70%, hot & humid conditions with intermittent rains														
Spodoptera (Leaf-eating caterpillar)		25–30 °C, RH 70–80%, continuous cloudy weather, frequent irrigation															