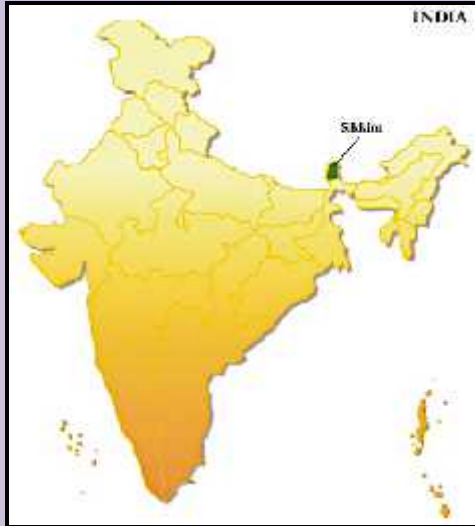




**STATE COMPOSITE AGRO-MET ADVISORY
BULLETIN FOR THE STATE OF SIKKIM
PERIOD: 13th JULY to 17th JULY 2019**



*IMD, GANGTOK IN COLLABORATION WITH ICAR, GANGTOK,
FSAD AND HCCD, GANGTOK*



ISSUED ON 12th July 2019

Meteorological Sub-division of Sikkim

As per India Meteorological Department's classification, Sikkim is a part of Met Sub-Division of Sub Himalayan West Bengal & Sikkim (SHWB & SKM) and is divided into four (4) Districts:

- 1) North District with HQ at Mangan
- 2) East District with HQ at Gangtok
- 3) West District with HQ at Gyalsing
- 4) South District with HQ at Namchi

Issued by: Santanu Das, SMS (Agril. Meteorology), ICAR-KVK, East Sikkim, Ranipool

Value Added forecast for NORTH-DISTRICT for next five days

Parameter/Date	13/07/2019	14/07/2019	15/07/2019	16/07/2019	17/07/2019
Rainfall (mm)	Moderate rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall
Max Temp (⁰ C)	23	23	24	25	26
Min Temp (⁰ C)	20	20	20	20	20
Sky condition	Overcast	Overcast	Overcast	Generally cloudy	Generally cloudy
Max RH (%)	97	95	93	91	92
Min RH (%)	90	90	86	85	82
Wind Speed (Kmph)	7	5	4	5	4
Wind Direction (deg)	SE	SE	S	S	SE

Northerly- **N**, North-Easterly- **N-E**, Easterly- **E**, South-Easterly- **S-E**, Southerly- **S**, South-Westerly- **S-W**, Westerly-**W**, North-westerly- **N-W**.

Weather for preceding week			
Date	Rainfall	Max. Temp	Min. Temp
	(mm)	(⁰ C)	(⁰ C)
09/7/2019	009	23.0	19.8
10/7/2019	012	25.6	20.2
11/7/2019	045	23.2	19.8

Weather forecast valid up to 17th July 2019

- Probability of moderate rainfall
- Max temp may be varying from 23-26°C, whereas, Min temp may vary from 0-20°C
- Sky will remain overcasted
- Max RH is likely to be 92-97 %, whereas, Min RH may vary from 82-90%
- Wind speed may likely vary from 4-7 km/hr.
- Wind direction may blow from southeasterly to southerly and again southeasterly
- Weekly cumulative rainfall=161 mm
- **Heavy rain very likely to occur at one or two places over the district during Friday to Tuesday**

Value Added forecast for EAST-DISTRICT for next five days

Parameter/Date	13/07/2019	14/07/2019	15/07/2019	16/07/2019	17/07/2019
Rainfall (mm)	Moderate rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall	Light rainfall
Max Temp (°C)	20	20	21	22	23
Min Temp (°C)	17	17	18	18	18
Sky condition	Overcast	Overcast	Overcast	Generally cloudy	Generally cloudy
Max RH (%)	97	96	93	92	91
Min RH (%)	90	90	87	84	82
Wind Speed (Kmph)	3	2	3	3	3
Wind Direction (deg)	NE	NE	SE	E	E

Northerly- **N**, North-Easterly- **N-E**, Easterly- **E**, South-Easterly- **S-E**, Southerly- **S**, South-Westerly- **S-W**, Westerly-**W**, North-westerly- **N-W**.

Weather for preceding week			
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)
09/7/2019	032	20.8	17.7
10/7/2019	004	20.0	18.1
11/7/2019	027	19.9	18.4

Weather forecast valid up to 17th July 2019

- Probability of moderate rainfall
- Max temp may be varying from 20-23°C, whereas, Min temp may vary from 17-18°C
- Sky will remain overcast
- Max RH is likely to be 91-97 %, whereas, Min RH may vary from 82-90 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from northeasterly to southeasterly and finally easterly
- Weekly cumulative rainfall= 142 mm
- **Heavy to very heavy rain very likely to occur at one or two places over the district during Friday to Sunday**

Value Added forecast for SOUTH-DISTRICT for next five days

Parameter/Date	13/07/2019	14/07/2019	15/07/2019	16/07/2019	17/07/2019
Rainfall (mm)	Moderate rainfall	Moderate rainfall	Moderate rainfall	Light rainfall	Light rainfall
Max Temp (°C)	23	24	24	25	26
Min Temp (°C)	19	20	20	21	21
Sky condition	Overcast	Overcast	Generally cloudy	Generally cloudy	Partially clear
Max RH (%)	95	93	92	91	91
Min RH (%)	85	85	84	82	80
Wind Speed (Kmph)	4	4	4	3	2
Wind Direction (deg)	NE	NE	E	E	E

Northerly- **N**, North-Easterly- **N-E**, Easterly- **E**, South-Easterly- **S-E**, Southerly- **S**, South-Westerly- **S-W**, Westerly-**W**, North-westerly- **N-W**.

Weather for preceding week			
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)
09/7/2019	010	28.5	16.0
10/7/2019	017	25.0	15.0
11/7/2019	012	N/A	13.5

Weather forecast valid up to 17th July 2019

- There will be chances of moderate rainfall
- Max temp may be varying from 23-26°C, whereas, Min temp may vary from 19-21°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-95%, whereas, Min RH may var from 80-85 %
- Wind speed may likely vary from 2-4 km/hr.
- Wind direction may blow from northeasterly to easterly
- Weekly cumulative rainfall= 100 mm
- ***Heavy to very heavy rain very likely to occur at one or two places over the district during Friday to Sunday***

Value Added forecast for WEST-DISTRICT for next five days

Parameter/Date	13/07/2019	14/07/2019	15/07/2019	16/07/2019	17/07/2019
Rainfall (mm)	Moderate rainfall	Moderate rainfall	Moderate rainfall	Light rainfall	Light rainfall
Max Temp (°C)	20	21	22	23	24
Min Temp (°C)	18	17	18	18	19
Sky condition	Overcast	Overcast	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	95	95	93	92	90
Min RH (%)	88	87	85	82	81
Wind Speed (Kmph)	3	3	3	4	3
Wind Direction (deg)	S	N	W	S	S

Northerly- **N**, North-Easterly- **N-E**, Easterly- **E**, South-Easterly- **S-E**, Southerly- **S**, South-Westerly- **S-W**, Westerly-**W**, North-westerly- **N-W**.

Weather for preceding week			
Date	Rainfall	Max. Temp	Min. Temp
	(mm)	(°C)	(°C)
09/7/2019	005	22.6	17.5
10/7/2019	005	21.7	17.7
11/7/2019	005	20.1	18.4


Weather forecast valid up to 17th July 2019


- Probability of moderate rainfall
- Max temp may be varying from 20-24°C, whereas, Min temp may vary from 17-19°C
- Sky will remain overcasted
- Max RH is likely to be 90-95%, whereas, Min RH may var from 81-88 %
- Wind speed may likely vary from 3-4 km/hr.
- Wind direction may blow from southerly to northerly then westerly to finally again southerly
- Weekly cumulative rainfall= 104 mm
- **Heavy to very heavy rain very likely to occur at one or two places over the district on Friday**

AGRO-METEOROLOGICAL ADVISORIES

General Advisories for all the crops/ livestock

- ➔ Bunding at terrace should be done to reduce nutrient losses due to heavy rainfall
- ➔ Keep the field ready for paddy transplanting
- ➔ Crop field should be free from weed, during flowering stage
- ➔ *Jalkund* should be dug out for rain water harvesting.
- ➔ Spraying of bio pesticides (neem based formulation 1500 ppm @5ml/lit. and copper oxy chloride 50%WP @ 2.5g/lit.) at weekly interval for insect pest and diseases.
- ➔ Regular supplementation of vitamins and mineral mixture to the livestock to improve the productive and reproductive performance of animals.
- ➔ Milching animals should be feed 70-80 ml Calcium daily for better milk yield and good health
- ➔ Vaccinate cattle, goat and pig against Foot and Mouth Diseases (FMD).


Name of the crop/Animal	Stage	Cultural practices/ Pest/ Diseases	Agro-Met Advisories
<i>Agricultural and Horticultural crops:</i>			
Maize	Knee height stage 	Army worm	<ul style="list-style-type: none">◆ Field should be weed free without damaging the main crop while uprooting the weeds.◆ Two foliar spray of neem based formulation (1500ppm) @ 0.5% or 5 ml/lit. of water at weekly interval◆ Avoid weeding during tasseling stage◆ Keep drainage facilities in field◆ Regular inspection of field for insect pest infestation◆ The harvested cobs should be well dry at moisture content at 10-12 %◆ Use bird scarer for the control of birds
Rice	Main field preparation and transplanting		<ul style="list-style-type: none">◆ Start field preparation for paddy transplantation through repairing old bunds by maintaining 20-30 cm

			<p>height in lowland situation</p> <ul style="list-style-type: none"> ◆ As sufficient moisture is available due to moderate/heavy rain in the previous days, farmers should start ploughing of their main field. ◆ Uprooting of 25-30 days old rice seedlings may be done depending on availability of water for transplantation ◆ Seedling of Main season rice can be raised up to first week of July and can be transplanted within 3rd week of July (for late transplanting). ◆ Application of FYM 10-15 t/ha or vermicompost @ 3-6 t/ha either alone or in combination should be applied at 10 days before transplanting ◆ Green manuring with <i>dhaincha</i> (<i>susbania aculeata</i>) can be incorporated
Ginger/ Turmeric	Tillering stage		<ul style="list-style-type: none"> ◆ Remove the weeds without breaking the sprouted ginger tillers. ◆ Drench the ginger field with cow urine at 1:4 (urine: water) ratio or fresh cow dung slurry at fortnightly interval ◆ Start spraying copper oxy chloride @ 0.25 % at weekly interval
Large cardamom	Planting 		<ul style="list-style-type: none"> ◆ A 2 years old nursery suckers should be planted in the main field ◆ A spacing of 1.8×1.8 m² should be maintained. ◆ Young white coloured roots should not be destroy while planting, while old roots should trimmed out.
Early kharif vegetables	Vegetative growth		<ul style="list-style-type: none"> ◆ Weeding and intercultural operation should be done
Red cherry pepper/Brinjal	Vegetative	Blight	<ul style="list-style-type: none"> ◆ Plants should be keep weed free and avoid water stagnation ◆ Spraying of COC @ 2-3 ml/lit. at weekly interval ◆ Five spray of neem based formulation 1500 ppm @ 5 ml/1 lit. of weekly interval for controlling of <i>Aphids</i>

Cole crops/ Tomato	Nursery preparation	<ul style="list-style-type: none"> ◆ Start preparation of nursery beds for early and late kharif tomato ◆ Use early varieties of cabbage (early ball) cauliflower (white excel), broccoli (Aishwarya) and tomato (varieties Arka rakshak, Arka samrat, and All rounder) ◆ Apply FYM 2 kg/m², neem cake @ 200 g/m², Trichoderma@ 1 % should be incorporated in soil during nursery bed preparation. ◆ Nursery bed should be prepared inside the poly tunnel/rain shelter system.
Sikkim Mandarin	Planting/fruiting	<ul style="list-style-type: none"> ◆ Keep the orchard weed free ◆ Digging the pit of 3 feet× 3 feet × 3 feet for transplanting new saplings ◆ Top soil of the pit should be mixed with FYM @20 kg/pit

Animal Sciences and livestock management

Tibetan Sheep		<ul style="list-style-type: none"> ◆ Feeding of concentrate feed along with mineral mixture and salt. ◆ Hay feeding is recommended.
Yak		<ul style="list-style-type: none"> ◆ Feeding of concentrate feed along with mineral mixture and salt. ◆ Hay feeding is recommended. ◆ Trimming of hair is recommended during summer season
Sheep and Goat		<ul style="list-style-type: none"> ◆ Farmers are advised to look for heat sign especially during early morning or late evening and ensure breeding of the dairy cattle within 12-18 hours after onset of heat symptoms ◆ Breeding of the sheep/goat should be done 24-30 hr. after onset of heat. ◆ Feeding of concentrate feed along with jaggery, mineral mixture and salt is recommended. ◆ Periodic application of fly repellents and/or netting of dung pit is recommended.
Cattle		<ul style="list-style-type: none"> ◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended. Colostrum (first three days milk)

			<p>feeding to new born calf for first three days of life should be ensured.</p> <ul style="list-style-type: none"> ◆ Full hand milking should be practiced. ◆ Frequent incomplete milking at interval of 4hrs should be practiced after parturition for minimum 1 week. Later on, complete milking in subsequent day is recommended.
Poultry		Coccidiosis, Ranikhet disease	<ul style="list-style-type: none"> ◆ 16 hrs of light (natural and electrical) should be provided to adult birds for optimum egg production. ◆ Frequent raking and liming of deep litter materials is recommended. ◆ Inclusion of turmeric powder @ 10g/kg in poultry feed for prevention of coccidiosis. ◆ Maintenance of brooder temperature for chicks with the help of electrical bulbs for initial one month. ◆ Ranikhet vaccination for poultry at 5-7 days and at 28-30 days of age is highly recommended. ◆ Calcium/shell grit and multi vitamin supplementation is strongly recommended to optimize egg production. ◆ Occasional spraying of ectoparasiticides <i>viz.</i>, deltamethrin/cypermethrin @ 1% v/v in water is recommended.
Pig	All stages	Swine fever	<ul style="list-style-type: none"> ◆ Keep floor dry to avoid skin diseases. ◆ Weaning is recommended at the age of 8 weeks for crossbreds and 10 weeks for indigenous pigs. ◆ Swine fever vaccine at the age of 3 months is recommended. ◆ Critical heat detection in early morning and late evening is recommended. ◆ Farmers can incorporate low cost locally available feed resources (60%) for feeding pigs to reduce the cost of feeding

Agro-Met Advisory member of ICAR-NOFRI and KVK- East Sikkim

Name	Designation	Department
<i>Dr. R. K. Avasthe</i>	Joint Director	Soil Science
<i>Dr. Raghavendra Singh</i>	Senior scientist and Head (I/C)	Agronomy
<i>Dr. P. K. Pathak</i>	SMS	Animal science
<i>Dr. J.K. Singh</i>	SMS	Plant Breeding
<i>Dr. Manoj Kumar</i>	SMS	Agronomy
<i>Sh. Boniface Lepcha</i>	SMS	Horticulture
<i>Sh. Santanu Das</i>	SMS	Agril. Meteorology
<i>Miss Tirtha Kumari Chettri</i>	Met. Observer	Biochemistry