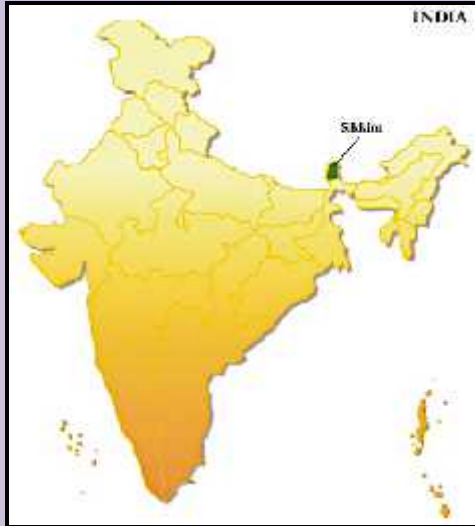




**STATE COMPOSITE AGRO-MET ADVISORY  
BULLETIN FOR THE STATE OF SIKKIM  
PERIOD: 17<sup>th</sup> JULY to 21<sup>st</sup> JULY 2019**



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



**ISSUED ON 16<sup>th</sup> 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	17/07/2019	18/07/2019	19/07/2019	20/07/2019	21/07/2019
Rainfall (mm)	Moderate rainfall	Light rainfall	Light rainfall	Light rainfall	Light rainfall
Max Temp ( <sup>0</sup> C)	25	27	28	29	29
Min Temp ( <sup>0</sup> C)	20	20	21	21	21
Sky condition	Cloudy	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	94	92	91	90	92
Min RH (%)	85	82	80	75	80
Wind Speed (Kmph)	4	3	2	3	4
Wind Direction (deg)	SE	S	SE	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)	( <sup>0</sup> C)	( <sup>0</sup> C)
13/7/2019	034	25.0	18.7
14/7/2019	016	21.8	19.2
15/7/2019	017	23.1	19.2

### Weather forecast valid up to 21<sup>st</sup> July 2019

- Probability of light rainfall
- Max temp may be varying from 25-29°C, whereas, Min temp may vary from 20-21°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-94 %, whereas, Min RH may vary from 75-85%
- Wind speed may likely vary from 2-4 km/hr.
- Wind direction may blow from southeasterly to southerly and again southeasterly
- Weekly cumulative rainfall=54 mm
- **Heavy to very heavy rain very likely to occur at one or two places over the district on Tuesday**

## Value Added forecast for EAST-DISTRICT for next five days

Parameter/Date	17/07/2019	18/07/2019	19/07/2019	20/07/2019	21/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Light rainfall	Light rainfall	Light rainfall
Max Temp (°C)	21	23	24	24	24
Min Temp (°C)	17	17	18	19	19
Sky condition	Cloudy	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	95	93	91	90	91
Min RH (%)	85	82	80	80	84
Wind Speed (Kmph)	2	2	2	2	3
Wind Direction (deg)	NE	NE	NE	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)
13/7/2019	037	20.7	17.0
14/7/2019	027	18.9	17.5
15/7/2019	035	19.2	17.5

### Weather forecast valid up to 21<sup>st</sup> July 2019

- Probability of light rainfall
- Max temp may be varying from 21-24°C, whereas, Min temp may vary from 17-19°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-95 %, whereas, Min RH may vary from 80-85 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from northeasterly to easterly
- Weekly cumulative rainfall= 27 mm

## Value Added forecast for SOUTH-DISTRICT for next five days

Parameter/Date	17/07/2019	18/07/2019	19/07/2019	20/07/2019	21/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Light rainfall	Light rainfall	Light rainfall
Max Temp ( <sup>0</sup> C)	26	27	28	29	28
Min Temp ( <sup>0</sup> C)	20	20	21	21	21
Sky condition	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	93	92	90	90	91
Min RH (%)	83	82	76	72	78
Wind Speed (Kmph)	3	2	2	2	3
Wind Direction (deg)	N	N	N	NE	NE

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 ( <sup>0</sup> C)	Min. Temp ( <sup>0</sup> C)
13/7/2019	016	23.0	10.5
14/7/2019	014	25.0	11.5
15/7/2019	010	21.5	12.0

### Weather forecast valid up to 21<sup>st</sup> July 2019

- There will be chances of light rainfall
- Max temp may be varying from 26-29°C, whereas, Min temp may vary from 20-21°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-93%, whereas, Min RH may var from 76-83 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from northerly to northeasterly
- Weekly cumulative rainfall= 28 mm

## Value Added forecast for WEST-DISTRICT for next five days

Parameter/Date	17/07/2019	18/07/2019	19/07/2019	20/07/2019	21/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Very light rainfall	Light rainfall	Light rainfall
Max Temp (°C)	23	24	26	27	27
Min Temp (°C)	18	18	19	19	19
Sky condition	Cloudy	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	92	91	90	90	92
Min RH (%)	82	80	78	75	80
Wind Speed (Kmph)	4	3	3	2	2
Wind Direction (deg)	NW	N	N	N	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)
13/7/2019	004	21.4	17.8
14/7/2019	003	19.4	17.2
15/7/2019	004	19.6	17.6


### Weather forecast valid up to 21<sup>st</sup> July 2019


- Probability of light rainfall
- Max temp may be varying from 20-24°C, whereas, Min temp may vary from 17-19°C
- Sky will remain generally cloudy
- Max RH is likely to be 90-92%, whereas, Min RH may var from 75-82 %
- Wind speed may likely vary from 2-4 km/hr.
- Wind direction may blow from northwesterly to northerly then finally again southerly
- Weekly cumulative rainfall= 18 mm

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

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




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

### *Animal Sciences and livestock management*

Tibetan Sheep		<ul style="list-style-type: none"> <li>◆ Feeding of concentrate feed along with mineral mixture and salt.</li> <li>◆ Hay feeding is recommended.</li> </ul>
Yak		<ul style="list-style-type: none"> <li>◆ Feeding of concentrate feed along with mineral mixture and salt.</li> <li>◆ Hay feeding is recommended.</li> <li>◆ Trimming of hair is recommended during summer season</li> </ul>
Sheep and Goat		<ul style="list-style-type: none"> <li>◆ 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</li> <li>◆ Breeding of the sheep/goat should be done 24-30 hr. after onset of heat.</li> <li>◆ Feeding of concentrate feed along with jaggery, mineral mixture and salt is recommended.</li> <li>◆ Periodic application of fly repellents and/or netting of dung pit is recommended.</li> </ul>
Cattle		<ul style="list-style-type: none"> <li>◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended. Colostrum (first three days milk)</li> </ul>



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

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

<b>Name</b>	<b>Designation</b>	<b>Department</b>
<i>Dr. R. K. Avasthe</i>	<b>Joint Director</b>	<b>Soil Science</b>
<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