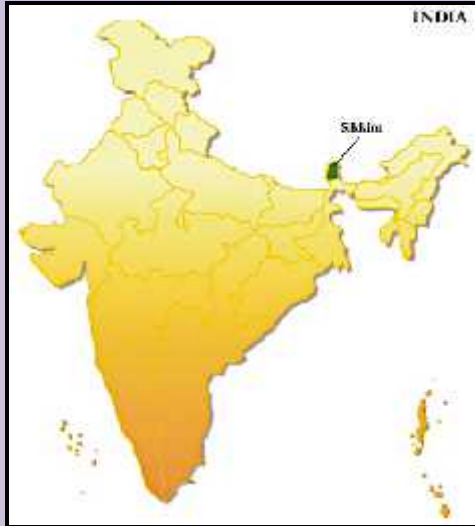




**STATE COMPOSITE AGRO-MET ADVISORY
BULLETIN FOR THE STATE OF SIKKIM
PERIOD: 20th JULY to 24th JULY 2019**



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



ISSUED ON 19th 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	20/07/2019	21/07/2019	22/07/2019	23/07/2019	24/07/2019
Rainfall (mm)	Moderate rainfall	Light rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall
Max Temp (°C)	27	27	27	28	28
Min Temp (°C)	22	22	21	21	21
Sky condition	Generally cloudy	Generally cloudy	Generally cloudy	Cloudy	Generally cloudy
Max RH (%)	92	91	93	94	92
Min RH (%)	80	78	84	89	82
Wind Speed (Kmph)	3	2	2	2	3
Wind Direction (deg)	SE	SE	E	E	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 (mm)	Max. Temp (°C)	Min. Temp (°C)
16/7/2019	080	N/A	19.4
17/7/2019	000	31.1	19.5
18/7/2019	000	30.8	20.0

Weather forecast valid up to 24th July 2019

- Probability of moderate rainfall
- Max temp may be varying from 27-28°C, whereas, Min temp may vary from 21-22°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-94 %, whereas, Min RH may vary from 78-89%
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from southeasterly to easterly and again southeasterly
- Weekly cumulative rainfall=138 mm
- **HEAVY RAIN VERY LIKELY TO AFFECTS AT ONE OR TWO PLACES OF THE DISTRICT ON SUNDAY & MONDAY**

Value Added forecast for EAST-DISTRICT for next five days

Parameter/Date	20/07/2019	21/07/2019	22/07/2019	23/07/2019	24/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall
Max Temp (°C)	24	24	22	21	20
Min Temp (°C)	18	18	18	17	17
Sky condition	Generally cloudy	Generally cloudy	Generally cloudy	Cloudy	Cloudy
Max RH (%)	91	90	92	94	93
Min RH (%)	84	82	85	87	86
Wind Speed (Kmph)	4	2	3	2	2
Wind Direction (deg)	NE	E	SE	E	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	Max. Temp	Min. Temp
	(mm)	(°C)	(°C)
16/7/2019	009	20.2	17.2
17/7/2019	042	24.0	17.4
18/7/2019	000	25.0	18.0

Weather forecast valid up to 24th July 2019

- Probability of moderate rainfall
- Max temp may be varying from 21-24°C, whereas, Min temp may vary from 17-18°C
- Sky will remain generally cloudy
- Max RH is likely to be 91-94 %, whereas, Min RH may vary from 82-87 %
- Wind speed may likely vary from 2-4 km/hr.
- Wind direction may blow from northeasterly to easterly, then southeasterly to easterly and finally northeasterly
- Weekly cumulative rainfall= 80 mm
- **HEAVY RAIN VERY LIKELY TO AFFECTS AT ONE OR TWO PLACES OF THE DISTRICT ON SUNDAY & MONDAY**

Value Added forecast for SOUTH-DISTRICT for next five days

Parameter/Date	20/07/2019	21/07/2019	22/07/2019	23/07/2019	24/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Light rainfall	Moderate rainfall	Light rainfall
Max Temp (°C)	26	26	27	25	27
Min Temp (°C)	21	20	21	20	20
Sky condition	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy	Generally cloudy
Max RH (%)	91	90	91	92	91
Min RH (%)	76	72	74	80	82
Wind Speed (Kmph)	4	3	2	000	3
Wind Direction (deg)	N	NE	E	NE	N

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)
16/7/2019	019	25.4	18.9
17/7/2019	014	27.0	19.2
18/7/2019	010	27.2	18.9

Weather forecast valid up to 24th July 2019

- There will be chances of light rainfall
- Max temp may be varying from 25-27°C, whereas, Min temp may vary from 20-21°C
- Sky will remain generally cloudy
- Max RH is likely to be 90-92%, whereas, Min RH may var from 72-82 %
- Wind speed may likely vary from 0-4 km/hr.
- Wind direction may blow from northerly to northeasterly then easterly to northeasterly and finally northerly
- Weekly cumulative rainfall= 56mm

Value Added forecast for WEST-DISTRICT for next five days

Parameter/Date	20/07/2019	21/07/2019	22/07/2019	23/07/2019	24/07/2019
Rainfall (mm)	Light rainfall	Light rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall
Max Temp (°C)	27	28	28	27	27
Min Temp (°C)	21	20	21	20	20
Sky condition	Generally cloudy	Generally cloudy	Generally cloudy	Cloudy	Generally cloudy
Max RH (%)	92	90	92	94	92
Min RH (%)	82	75	80	85	86
Wind Speed (Kmph)	3	3	3	2	3
Wind Direction (deg)	N	N	S	N	N

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)
16/7/2019	003	22.3	17.7
17/7/2019	028	26.8	18.1
18/7/2019	000	27.3	17.6


Weather forecast valid up to 24th July 2019


- Probability of moderate rainfall
- Max temp may be varying from 27-28°C, whereas, Min temp may vary from 20-21°C
- Sky will remain generally cloudy
- Max RH is likely to be 90-94%, whereas, Min RH may var from 75-86 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from northerly to southerly then finally again northerly
- Weekly cumulative rainfall= 70 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
<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