



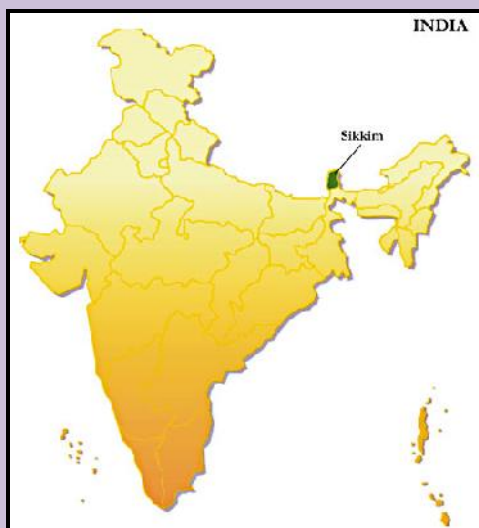
# AGRO-MET ADVISORY BULLETIN FOR THE DISTRICT OF NORTH SIKKIM

**PERIOD:**

**14<sup>th</sup> SEPTEMBER to 18<sup>th</sup> SEPTEMBER' 2019**



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



**ISSUED ON 13<sup>th</sup> September 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	14/09/2019	15/09/2019	16/09/2019	17/09/2019	18/09/2019
Rainfall (mm)	Moderate rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall	Moderate rainfall
Max Temp ( $^{\circ}\text{C}$ )	25	26	27	25	25
Min Temp ( $^{\circ}\text{C}$ )	20	20	20	20	20
Sky condition	Cloudy	Generally cloudy	Cloudy	Generally cloudy	Generally cloudy
Max RH (%)	94	92	93	94	92
Min RH (%)	84	82	83	85	82
Wind Speed (Kmph)	4	4	3	3	3
Wind Direction (deg)	SE	S	S	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)	( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )
10/09/2019	000	N/A	20.9
11/09/2019	000	29.9	21.2
12/09/2019	020	27.9	20.8

### Weather forecast valid up to 18<sup>th</sup> September 2019


- Probability of moderate rainfall
- Max temp may be varying from 25-27 $^{\circ}\text{C}$ , whereas, Min temp may vary from 0-20 $^{\circ}\text{C}$
- Sky will remain generally cloudy
- Max RH is likely to be 92-94 %, whereas, Min RH may vary from 82-85 %
- Wind speed may likely vary from 3-4 km/hr.
- Wind direction may blow from southerly
- Weekly cumulative rainfall=94 mm

## AGRO-METEOREOLOGICAL 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 black gram (pahelo dal) sowing
- ➡ 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 oxychloride 50%WP @ 2.5g/lit.) at weekly interval for insect pest and diseases management
- ➡ Regular supplementation of vitamins and mineral mixture to the livestock is recommended to improve the productive and reproductive performance of animals.
- ➡ Milching dairy cow should be feed 70-80 ml calcium daily for better milk yield and good health
- ➡ FMD (foot and Mouth Disease) vaccination should be given to cattle, goat and pig
- ➡ Enterotoxaemia & PPR vaccine is highly recommended for goat

Name of the crop/Animal	Stage	Cultural practices/ Pest/ Diseases	Agro-Met Advisories
<b><i>Agricultural and Horticultural crops:</i></b>			
Maize	Transplanting completed (vegetative stage)	Army worm	◆ Harvest the crop in bright sunny days ◆ Green cobs can be harvested to sell in the market.
Rice	Main field preparation and transplanting		◆ Apply <i>Azolla</i> in the paddy field ◆ Complete the first weeding
Black gram (Pahelo dal)	Land preparation/ sowing		◆ After harvesting of maize plough the land and apply well decomposed FYM @ 2.0 ton/ ha + vermicompost 0.5 ton/ha + neem cake 100 kg/ha ◆ Sow the seeds at spacing of 30-45 cm × 15 cm.

			<ul style="list-style-type: none"> <li>Seed treatment with Trichoderma sp. @ 5-10 g/kg seed and soil treatment @ 2.5 kg mixed with 50 kg FYM is recommended.</li> </ul>
Rjmash/Cowpea	Land preparation/ Sowing		<ul style="list-style-type: none"> <li>Prepared the land &amp; add 10-15 tonnes/ha FYM in the pits or lines in raised bed, 10-15 days before planting.</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</li> </ul>

			inside the poly tunnel/rain shelter system.
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>
<b><i>Animal Sciences and livestock management</i></b>			
Tibetan Sheep			<ul style="list-style-type: none"> <li>◆ Recommended for feeding concentrate feed along with mineral mixture and salt.</li> <li>◆ Hay feeding is recommended.</li> </ul>
Yak			<ul style="list-style-type: none"> <li>◆ Recommended for feeding 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>◆ 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>◆ 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>◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended.</li> <li>◆ Colostrum (first three days milk) feeding to new born calf for first three days of life should be ensured.</li> <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.</li> </ul>

			<p>Later on, complete milking in subsequent day is recommended.</p>
Poultry		<p>Coccidiosis, Ranikhet disease</p>	<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 is recommended.</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 viz., 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 followed by annual booster dose is recommended.</li> <li>◆ Critical heat detection of sow/ gilt 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>

<b>Name</b>	<b>Designation</b>	<b>Department</b>
<b><i>Dr. R. K. Avasthe</i></b>	<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





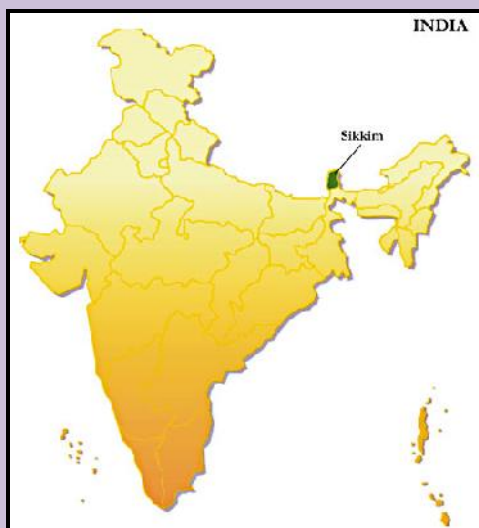
# AGRO-MET ADVISORY BULLETIN FOR THE DISTRICT OF EAST SIKKIM

**PERIOD:**

**14<sup>th</sup> SEPTEMBER to 18<sup>th</sup> SEPTEMBER' 2019**



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



**ISSUED ON 13<sup>th</sup> September 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 EAST-DISTRICT for next five days**

Parameter/Date	14/09/2019	15/09/2019	16/09/2019	17/09/2019	18/09/2019
Rainfall (mm)	Light rainfall	Light rainfall	Light rainfall	Light rainfall	Light rainfall
Max Temp ( $^{\circ}\text{C}$ )	22	24	23	22	23
Min Temp ( $^{\circ}\text{C}$ )	19	19	19	19	19
Sky condition	Cloudy	Generally cloudy	Generally cloudy	Cloudy	Generally cloudy
Max RH (%)	93	91	93	94	92
Min RH (%)	83	81	83	84	82
Wind Speed (Kmph)	4	4	3	3	3
Wind Direction (deg)	NE	NE	NE	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	Max. Temp	Min. Temp
	(mm)	( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )
10/09/2019	N/A	26.7	18.8
11/09/2019	N/A	N/A	19.6
12/09/2019	002	27.0	19.8

### **Weather forecast valid up to 18<sup>th</sup> September 2019**


- Probability of light rainfall
- Max temp may be varying from 22-24 $^{\circ}\text{C}$ , whereas, Min temp may vary from 19-22 $^{\circ}\text{C}$
- Sky will remain generally cloudy
- Max RH is likely to be 91-93 %, whereas, Min RH may vary from 82-84 %
- Wind speed may likely vary from 3-4 km/hr.
- Wind direction may blow from northeasterly
- Weekly cumulative rainfall= 52 mm

## AGRO-METEOREOLOGICAL 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 black gram (pahelo dal) sowing
- ➡ 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 oxychloride 50%WP @ 2.5g/lit.) at weekly interval for insect pest and diseases management
- ➡ Regular supplementation of vitamins and mineral mixture to the livestock is recommended to improve the productive and reproductive performance of animals.
- ➡ Milching dairy cow should be feed 70-80 ml calcium daily for better milk yield and good health
- ➡ FMD (foot and Mouth Disease) vaccination should be given to cattle, goat and pig
- ➡ Enterotoxaemia & PPR vaccine is highly recommended for goat

Name of the crop/Animal	Stage	Cultural practices/ Pest/ Diseases	Agro-Met Advisories
<b><i>Agricultural and Horticultural crops:</i></b>			
Maize	Transplanting completed (vegetative stage)	Army worm	◆ Harvest the crop in bright sunny days ◆ Green cobs can be harvested to sell in the market.
Rice	Main field preparation and transplanting		◆ Apply <i>Azolla</i> in the paddy field ◆ Complete the first weeding
Black gram (Pahelo dal)	Land preparation/ sowing		◆ After harvesting of maize plough the land and apply well decomposed FYM @ 2.0 ton/ ha + vermicompost 0.5 ton/ha + neem cake 100 kg/ha ◆ Sow the seeds at spacing of 30-45 cm × 15 cm.

			<ul style="list-style-type: none"> <li>◆ Seed treatment with Trichoderma sp. @ 5-10 g/kg seed and soil treatment @ 2.5 kg mixed with 50 kg FYM is recommended.</li> </ul>
Rjmash/Cowpea	Land preparation/ Sowing		<ul style="list-style-type: none"> <li>◆ Prepared the land &amp; add 10-15 tonnes/ha FYM in the pits or lines in raised bed, 10-15 days before planting.</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> </ul>

			<ul style="list-style-type: none"> <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>
<i>Animal Sciences and livestock management</i>			
Tibetan Sheep			<ul style="list-style-type: none"> <li>◆ Recommended for feeding concentrate feed along with mineral mixture and salt.</li> <li>◆ Hay feeding is recommended.</li> </ul>
Yak			<ul style="list-style-type: none"> <li>◆ Recommended for feeding 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>
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Cattle			<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>◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended.</li> <li>◆ Colostrum (first three days milk) feeding to new born calf for first three days of life should be ensured.</li> <li>◆ Full hand milking should be practiced.</li> </ul>

			<ul style="list-style-type: none"> <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 is recommended.</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 ectoparasitocides viz., 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 followed by annual booster dose is recommended.</li> <li>◆ Critical heat detection of sow/ gilt 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*

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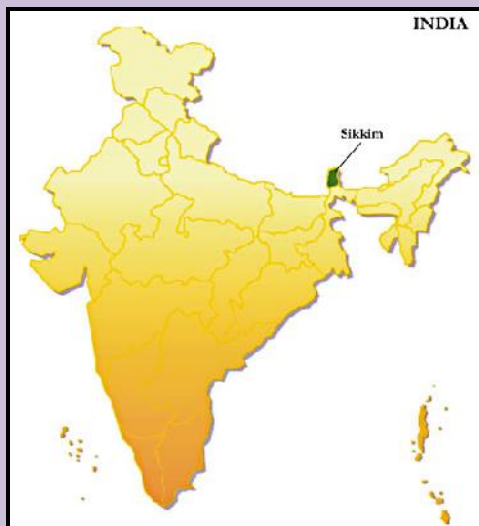
# AGRO-MET ADVISORY BULLETIN FOR THE DISTRICT OF SOUTH SIKKIM

**PERIOD:**

**14<sup>th</sup> SEPTEMBER to 18<sup>th</sup> SEPTEMBER' 2019**



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



**ISSUED ON 13<sup>th</sup> September 2019**

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- 1) North District with HQ at Mangan
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- 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 SOUTH-DISTRICT for next five days**

Parameter/Date	14/09/2019	15/09/2019	16/09/2019	17/09/2019	18/09/2019
Rainfall (mm)	Light rainfall	Light rainfall	Moderate rainfall	Light rainfall	Light rainfall
Max Temp ( $^{\circ}\text{C}$ )	21	22	23	22	23
Min Temp ( $^{\circ}\text{C}$ )	17	18	18	18	18
Sky condition	Cloudy	Generally cloudy	Cloudy	Cloudy	Cloudy
Max RH (%)	94	92	93	94	92
Min RH (%)	84	82	83	86	82
Wind Speed (Kmph)	3	3	3	2	2
Wind Direction (deg)	NW	NW	NW	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)	( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )
10/09/2019	000	26.8	18.9
11/09/2019	034	26.6	18.8
12/09/2019	000	24.1	18.6

### **Weather forecast valid up to 18<sup>th</sup> September 2019**


- There will be chances of light rainfall
- Max temp may be varying from 21-23 $^{\circ}\text{C}$ , whereas, Min temp may vary from 17-18 $^{\circ}\text{C}$
- Sky will remain generally cloudy
- Max RH is likely to be 92-94%, whereas, Min RH may vary from 82-86 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from northwesterly
- Weekly cumulative rainfall= 62 mm

## AGRO-METEREOLOGICAL 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 black gram (pahelo dal) sowing
- ➡ 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 oxychloride 50%WP @ 2.5g/lit.) at weekly interval for insect pest and diseases management
- ➡ Regular supplementation of vitamins and mineral mixture to the livestock is recommended to improve the productive and reproductive performance of animals.
- ➡ Milching dairy cow should be feed 70-80 ml calcium daily for better milk yield and good health
- ➡ FMD (foot and Mouth Disease) vaccination should be given to cattle, goat and pig
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Name of the crop/Animal	Stage	Cultural practices/ Pest/ Diseases	Agro-Met Advisories
<b><i>Agricultural and Horticultural crops:</i></b>			
Maize	Transplanting completed (vegetative stage)	Army worm	◆ Harvest the crop in bright sunny days ◆ Green cobs can be harvested to sell in the market.
Rice	Main field preparation and transplanting		◆ Apply <i>Azolla</i> in the paddy field ◆ Complete the first weeding
Black gram (Pahelo dal)	Land preparation/ sowing		◆ After harvesting of maize plough the land and apply well decomposed FYM @ 2.0 ton/ ha + vermicompost 0.5 ton/ha + neem cake 100 kg/ha ◆ Sow the seeds at spacing of 30-45 cm × 15 cm.

			<ul style="list-style-type: none"> <li>◆ Seed treatment with Trichoderma sp. @ 5-10 g/kg seed and soil treatment @ 2.5 kg mixed with 50 kg FYM is recommended.</li> </ul>
Rjmash/Cowpea	Land preparation/ Sowing		<ul style="list-style-type: none"> <li>◆ Prepared the land &amp; add 10-15 tonnes/ha FYM in the pits or lines in raised bed, 10-15 days before planting.</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>
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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>
<b><i>Animal Sciences and livestock management</i></b>			
Tibetan Sheep			<ul style="list-style-type: none"> <li>◆ Recommended for feeding concentrate feed along with mineral mixture and salt.</li> <li>◆ Hay feeding is recommended.</li> </ul>
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Sheep and Goat			<ul style="list-style-type: none"> <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>◆ 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>◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended.</li> <li>◆ Colostrum (first three days milk) feeding to new born calf for first three days of life should be ensured.</li> <li>◆ Full hand milking should be practiced.</li> </ul>

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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 is recommended.</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 ectoparasitocides viz., 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 followed by annual booster dose is recommended.</li> <li>◆ Critical heat detection of sow/ gilt 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*

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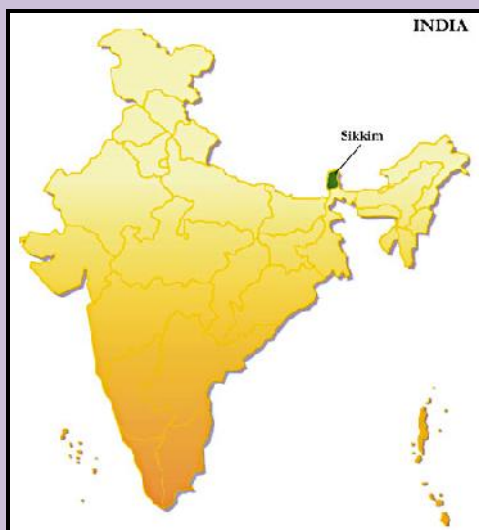


# AGRO-MET ADVISORY BULLETIN FOR THE DISTRICT OF WEST SIKKIM

## PERIOD:

**14<sup>th</sup> SEPTEMBER to 18<sup>th</sup> SEPTEMBER' 2019**

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



**ISSUED ON 13<sup>th</sup> September 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 WEST-DISTRICT for next five days

Parameter/Date	14/09/2019	15/09/2019	16/09/2019	17/09/2019	18/09/2019
Rainfall (mm)	Light rainfall	Light rainfall	Moderate rainfall	Light rainfall	Light rainfall
Max Temp ( $^{\circ}\text{C}$ )	21	22	23	22	23
Min Temp ( $^{\circ}\text{C}$ )	17	18	18	18	18
Sky condition	Cloudy	Generally cloudy	Cloudy	Cloudy	Cloudy
Max RH (%)	94	92	93	94	92
Min RH (%)	84	82	83	86	82
Wind Speed (Kmph)	3	3	3	2	2
Wind Direction (deg)	NW	NW	NW	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)	( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )
10/09/2019	000	26.8	18.9
11/09/2019	034	26.6	18.8
12/09/2019	000	24.1	18.6

### Weather forecast valid up to 18<sup>th</sup> September 2019


- Probability of light rainfall
- Max temp may be varying from 21-23 $^{\circ}\text{C}$ , whereas, Min temp may vary from 17-18 $^{\circ}\text{C}$
- Sky will remain cloudy
- Max RH is likely to be 92-94%, whereas, Min RH may vary from 82-86 %
- Wind speed may likely vary from 2-3 km/hr.
- Wind direction may blow from north westerly
- Weekly cumulative rainfall=62 mm

## AGRO-METEOREOLOGICAL 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 black gram (pahelo dal) sowing
- ➡ 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 oxychloride 50%WP @ 2.5g/lit.) at weekly interval for insect pest and diseases management
- ➡ Regular supplementation of vitamins and mineral mixture to the livestock is recommended to improve the productive and reproductive performance of animals.
- ➡ Milching dairy cow should be feed 70-80 ml calcium daily for better milk yield and good health
- ➡ FMD (foot and Mouth Disease) vaccination should be given to cattle, goat and pig
- ➡ Enterotoxaemia & PPR vaccine is highly recommended for goat

Name of the crop/Animal	Stage	Cultural practices/ Pest/ Diseases	Agro-Met Advisories
<b><i>Agricultural and Horticultural crops:</i></b>			
Maize	Transplanting completed (vegetative stage)	Army worm	◆ Harvest the crop in bright sunny days ◆ Green cobs can be harvested to sell in the market.
Rice	Main field preparation and transplanting		◆ Apply <i>Azolla</i> in the paddy field ◆ Complete the first weeding
Black gram (Pahelo dal)	Land preparation/ sowing		◆ After harvesting of maize plough the land and apply well decomposed FYM @ 2.0 ton/ ha + vermicompost 0.5 ton/ha + neem cake 100 kg/ha ◆ Sow the seeds at spacing of 30-45 cm × 15 cm.

			<ul style="list-style-type: none"> <li>◆ Seed treatment with Trichoderma sp. @ 5-10 g/kg seed and soil treatment @ 2.5 kg mixed with 50 kg FYM is recommended.</li> </ul>
Rjmash/Cowpea	Land preparation/ Sowing		<ul style="list-style-type: none"> <li>◆ Prepared the land &amp; add 10-15 tonnes/ha FYM in the pits or lines in raised bed, 10-15 days before planting.</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>
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