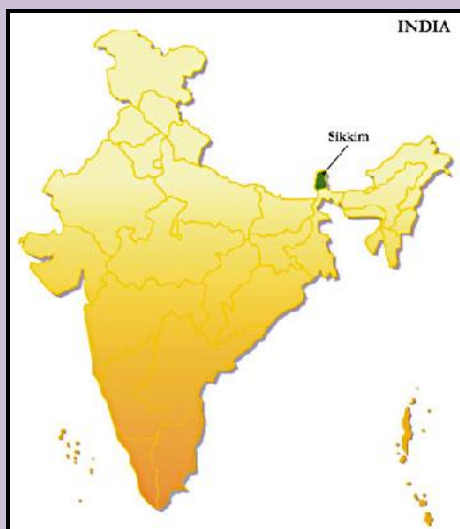




STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 13th APRIL TO 17th APRIL'2019



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



ISSUED ON TUESDAY 12th APRIL'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 Gyalshing
- 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 | 13/04/2019 | 14/04/2019 | 15/04/2019 | 16/04/2019 | 17/04/2019 |
|---------------------------------|---------------------|------------------|------------------|------------------|---------------------|
| Rainfall (mm) | Very light rainfall | Light rainfall | Light rainfall | Light rainfall | Very light rainfall |
| Max Temp ($^{\circ}\text{C}$) | 29 | 27 | 24 | 25 | 26 |
| Min Temp ($^{\circ}\text{C}$) | 17 | 16 | 13 | 14 | 15 |
| Sky condition | Partially cloudy | Generally cloudy | Generally cloudy | Generally cloudy | Generally cloudy |
| Max RH (%) | 87 | 90 | 92 | 90 | 85 |
| Min RH (%) | 50 | 68 | 76 | 74 | 65 |
| Wind Speed (Kmph) | 3 | 4 | 6 | 3 | 3 |
| Wind Direction (deg) | S | SW | SW | SW | SW |

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) | ($^{\circ}\text{C}$) | ($^{\circ}\text{C}$) |
| 9/4/2019 | 013 | 25.0 | 09.0 |
| 10/4/2019 | 000 | 27.0 | 09.0 |
| 11/4/2019 | 000 | 27.2 | 09.1 |

Weather forecast valid up to 17th April 2019

- Probability of light rainfall
- Max temp may vary from 24-29 $^{\circ}\text{C}$, whereas, Min temp may vary from 13-17 $^{\circ}\text{C}$
- Sky will remain generally cloudy
- Max RH is likely to be 87-92%, whereas, Min RH may vary from 50-76%
- Wind speed may likely vary from 3-6 km/hr.
- Wind direction may blow from southerly to south westerly
- Weekly cumulative rainfall= 24 mm

Value Added forecast for EAST-DISTRICT for next five days

| Parameter/Date | 13/04/2019 | 14/04/2019 | 15/04/2019 | 16/04/2019 | 17/04/2019 |
|---------------------------------|---------------------|------------------|------------------|------------------|---------------------|
| Rainfall (mm) | Very light rainfall | Light rainfall | Light rainfall | Light rainfall | Very light rainfall |
| Max Temp ($^{\circ}\text{C}$) | 23 | 22 | 20 | 19 | 21 |
| Min Temp ($^{\circ}\text{C}$) | 14 | 13 | 11 | 11 | 12 |
| Sky condition | Partially cloudy | Generally cloudy | Generally cloudy | Generally cloudy | Partially cloudy |
| Max RH (%) | 87 | 90 | 90 | 88 | 85 |
| Min RH (%) | 48 | 62 | 72 | 70 | 62 |
| Wind Speed (Kmph) | 3 | 4 | 4 | 2 | 2 |
| 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) | ($^{\circ}\text{C}$) | ($^{\circ}\text{C}$) |
| 9/4/2019 | 001 | 18.7 | 10.6 |
| 10/4/2019 | 005 | 19.2 | 10.3 |
| 11/4/2019 | 000 | 21.3 | 13.2 |

Weather forecast valid up to 17th April march 2019

- Probability of very light to light rainfall
- Max temp may be vary from 19-23 $^{\circ}\text{C}$, whereas, Min temp may vary from 11-14 $^{\circ}\text{C}$
- Sky will remain generally cloudy
- Max RH is likely to be 85-90%, whereas, Min RH may var from 48-72%
- Wind speed may likely vary from 2-4 km/hr.
- Wind direction may blow from North easterly
- Weekly cumulative rainfall= 20 mm

Value Added forecast for SOUTH-DISTRICT for next five days

| Parameter/Date | 13/04/2019 | 14/04/2019 | 15/04/2019 | 16/04/2019 | 17/04/2019 |
|----------------------|------------------|------------------|------------------|------------------|------------------|
| Rainfall (mm) | No rain | Light rainfall | Light rainfall | Light rainfall | No rain |
| Max Temp (°C) | 26 | 25 | 23 | 24 | 25 |
| Min Temp (°C) | 16 | 15 | 13 | 00 | 14 |
| Sky condition | Partially cloudy | Generally cloudy | Generally cloudy | Generally cloudy | Partially cloudy |
| Max RH (%) | 65 | 90 | 92 | 90 | 73 |
| Min RH (%) | 42 | 69 | 75 | 70 | 52 |
| Wind Speed (Kmph) | 2 | 3 | 3 | 5 | 3 |
| Wind Direction (deg) | NE | NE | 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 | Max. Temp | Min. Temp |
| | (mm) | (°C) | (°C) |
| 9/4/2019 | 000 | N/A | 12.5 |
| 10/4/2019 | N/A | N/A | N/A |
| 11/4/2019 | N/A | N/A | N/A |

Weather forecast valid up to 17th April 2019

- Probability of light rainfall
- Max temp may be vary from 23-26°C, whereas, Min temp may vary from 13-16°C
- Sky will remain generally cloudy
- Max RH is likely to be 65-92 %, whereas, Min RH may var from 42-75%
- Wind speed may likely vary from 2-5 km/hr.
- Wind direction may blow from north easterly via Northerly
- Weekly cumulative rainfall= 13 mm

Value Added forecast for WEST-DISTRICT for next five days

| Parameter/Date | 13/04/2019 | 14/04/2019 | 15/04/2019 | 16/04/2019 | 17/04/2019 |
|----------------------|------------------|------------------|------------------|------------------|------------------|
| Rainfall (mm) | No rain | Light rainfall | Light rainfall | Very light rain | No rain |
| Max Temp (°C) | 24 | 22 | 20 | 21 | 22 |
| Min Temp (°C) | 15 | 14 | 12 | 12 | 13 |
| Sky condition | Generally cloudy | Generally cloudy | Generally cloudy | Generally cloudy | Partially cloudy |
| Max RH (%) | 80 | 90 | 91 | 90 | 82 |
| Min RH (%) | 45 | 64 | 73 | 70 | 56 |
| Wind Speed (Kmph) | 4 | 5 | 5 | 3 | 2 |
| Wind Direction (deg) | N | N | N | 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) |
| 9/4/2019 | 000 | 18.7 | 10.8 |
| 10/4/2019 | N/A | 21.9 | 10.5 |
| 11/4/2019 | N/A | 23.8 | 13.0 |

Weather forecast valid up to 17th April 2019

- Probability of light rainfall
- Max temp may be vary from 21-24°C, whereas, Min temp may vary from 12-15°C
- Sky will remain generally cloudy
- Max RH is likely to be 80-91%, whereas, Min RH may var from 45-73%
- Wind speed may likely vary from 2-5 km/hr.
- Wind direction may blow from Northerly
- Weekly cumulative rainfall= 12 mm

AGRO-METEOREOLOGICAL ADVISORIES

General Advisories for all the crops/ livestock

- ➡ Harvest the matured crops to avoid damage from hailstorm
- ➡ Apply dolomite/agricultural lime at least 10 days prior to sowing the Kharif crops
- ➡ *Jalkund* should be dug out for rain water harvesting.
- ➡ Spraying of plant protection bio pesticides on bright sunny day for insect and disease management is recommended.
- ➡ Maintain strict hygiene and sanitation measures in poultry farm.
- ➡ Livestock should provide a strategic supplementation of vitamins and mineral mixture to improve the productive performance.
- ➡ Use preserved fodder like hay and silage to feed your livestock.

| Name of the crop/Animal | Stage | Cultural practices/ Pest/ Diseases | Agro-Met Advisories |
|---|-----------------------------|---------------------------------------|--|
| <i>Agricultural and Horticultural crops:</i> | | | |
| Maize | Land preparation and sowing | | <ul style="list-style-type: none">◆ Maize sowing should be done at 5-6 cm depth with a spacing of 60 cm × 20 cm (row × plant)◆ Provide adequate drainage facilities◆ Apply dolomite @ 0.5 t/ha in furrows◆ Apply well decomposed FYM @ 2.5 t/ha + mixed compost 2.5 t/ha + 0.5 t/ha neem cake and mix properly with soil 7-10 days before sowing |
| Buckwheat | Harvesting | | <ul style="list-style-type: none">◆ Should done at physiological maturity |
| Mustard/Toria | Harvesting | | <ul style="list-style-type: none">◆ Should done at physiological maturity |
| Ginger | Field preparation | | <ul style="list-style-type: none">◆ Identify healthy plants for seed rhizomes.◆ Selected rhizomes for planting material should be kept in partial shade for better sprouting.◆ Store the seed rhizome in the pit for a month to break the dormancy◆ Forest litter should be collected well in advance as mulching material.◆ Apply well decomposed FYM @ 20-25 t/ha + 1.0 t/ha neem cake and mix properly with soil 7-10 days before |

| | | | |
|---|------------------------------|-------------------------------------|--|
| | | | <p>sowing.</p> <ul style="list-style-type: none"> ◆ Broadcast dolomite @ 2 t/ha before sowing and mix properly with soil. |
| Large cardamom | Post-harvest crop management | | <ul style="list-style-type: none"> ◆ Regular monitoring for pest and disease incidence. ◆ Shade management with the proper lopping of trees. |
| Early kharif vegetables | Land preparation and Sowing | | <ul style="list-style-type: none"> ◆ Seed sowing of okra, beans etc. can be done |
| Pea | Pod maturity, harvesting | | <ul style="list-style-type: none"> ◆ Soil moisture should be maintained for good yield. ◆ Harvest the fully developed pod in early morning. ◆ For green pods of pea, pick/harvest at 4-5 days interval so as to stimulate generation of new flowers. ◆ Cautious picking should be done to avoid plant damage |
| Tomato/Red cherry pepper/Brinjal | Transplanting | Fruit borer/ white fly/ late blight | <ul style="list-style-type: none"> ◆ Nursery should prepare at 15 cm of height with 1 m width and length as per farmers convenience. ◆ 25-28 days old seedlings should be planted at 60 cm × 45 cm ◆ Bed should be prepared to a fine tilth by mixing well decomposed FYM @ 5 kg/m² and vermicompost @ 150 g/m² incubated with 1% <i>Trichoderma viride</i> for management of soil borne diseases. ◆ Use biodegradable polyfilm for mulching |
| Sikkim Mandarin | Vegetative flush | | <ul style="list-style-type: none"> ◆ Basin maintenance and manuring with FYM @ 30-35 kg/tree should be done. Avoid application of FYM close to the trunk. ◆ Tree trunk should be painted with Bordeaux mixture @ 1%. |
| 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. |

| | | | |
|----------------|--|-------------------------------|---|
| 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 12 hr after observation of heat. ◆ Breeding of the sheep/goat should be done 24-30 hr after observation of heat. ◆ Feeding of concentrate feed along with jaggery, mineral mixture and salt. ◆ Periodic application of fly repellents and/or netting of dung pit are recommended. |
| Cattle | | | <ul style="list-style-type: none"> ◆ Balanced feeding of dairy animals and allow calf suckling immediately after parturition. Colostrum (first three days milk) feeding to new born calf for first three days of life should be ensured. ◆ Full hand milking should be practiced. ◆ Frequent incomplete milking at interval of 4hrs should be practiced after parturition for minimum 1 week. Afterwards complete milking in a 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. ◆ Inclusion of turmeric powder @ 10g/kg feed for prevention of coccidiosis. ◆ Maintenance of brooder temperature for chicks with the help of electrical bulbs for initial one month. ◆ Ranikhet vaccination at 5-7 days and at 28-30 days of age. ◆ Calcium/shell grit and multi vitamin supplementation is strongly recommended to optimize egg production. ◆ Spraying of ectoparasiticides viz., deltamethrin/cypermethrin @ 1% v/v |

| | | | |
|-----|------------|-------------|--|
| | | | in water. |
| 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. ◆ Feed 5-10% green fodder of their diet. |

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

| Name | Designation | Department |
|-----------------------------------|--------------------------------|---------------------|
| Dr. R. K. Avasthe | 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> | Metrological observer | Biochemistry |