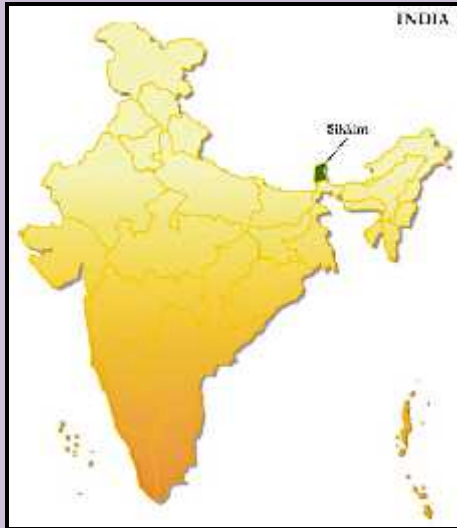




# STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 4<sup>th</sup> MAY to 8<sup>th</sup> MAY'2019



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



**ISSUED ON TUESDAY 3<sup>rd</sup> MAY'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             | 04/05/2019     | 05/05/2019     | 06/05/2019       | 07/05/2019      | 08/05/2019          |
|----------------------------|----------------|----------------|------------------|-----------------|---------------------|
| Rainfall (mm)              | Heavy rainfall | Heavy rainfall | Light rainfall   | Light rainfall  | Very light rainfall |
| Max Temp ( <sup>0</sup> C) | 21             | 20             | 22               | 24              | 25                  |
| Min Temp ( <sup>0</sup> C) | 16             | 14             | 14               | 15              | 16                  |
| Sky condition              | Cloudy         | cloudy         | Generally cloudy | Partially clear | Partially clear     |
| Max RH (%)                 | 94             | 94             | 91               | 88              | 88                  |
| Min RH (%)                 | 88             | 88             | 86               | 85              | 85                  |
| Wind Speed (Kmph)          | 6              | 6              | 6                | 4               | 5                   |
| Wind Direction (deg)       | S              | S              | SE               | SW              | 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<br>(mm) | Max. Temp<br>( <sup>0</sup> C) | Min. Temp<br>( <sup>0</sup> C) |
|------------|------------------|--------------------------------|--------------------------------|
| 30/04/2019 | 005              | 23.0                           | 08.2                           |
| 01/05/2019 | 000              | 29.0                           | 09.2                           |
| 02/05/2019 | 008              | 27.2                           | 08.1                           |

### Weather forecast valid up to 8<sup>th</sup> May 2019

- Probability of heavy rainfall
- Max temp may be varying from 20-24°C, whereas, Min temp may vary from 14-16°C
- Sky will remain cloudy
- Max RH is likely to be 88-94 %, whereas, Min RH may var from 85-88 %
- Wind speed may likely vary from 4-6 km/hr.
- Wind direction may blow from southerly to southeasterly and then again southwesterly to south easterly
- Weekly cumulative rainfall= 156 mm
- **Heavy Rain very likely to occur at one or two places with Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Friday and Saturday.**

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

| Parameter/Date       | 04/05/2019     | 05/05/2019     | 06/05/2019       | 07/05/2019      | 08/05/2019          |
|----------------------|----------------|----------------|------------------|-----------------|---------------------|
| Rainfall (mm)        | Heavy rainfall | Heavy rainfall | Light rainfall   | Light rainfall  | Very light rainfall |
| Max Temp (°C)        | 19             | 17             | 20               | 21              | 21                  |
| Min Temp (°C)        | 14             | 13             | 13               | 14              | 14                  |
| Sky condition        | Cloudy         | Cloudy         | Generally cloudy | Partially clear | Partially clear     |
| Max RH (%)           | 93             | 93             | 91               | 86              | 86                  |
| Min RH (%)           | 87             | 87             | 83               | 78              | 78                  |
| Wind Speed (Kmph)    | 5              | 4              | 4                | 3               | 4                   |
| Wind Direction (deg) | N              | E              | 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)     | (°C)      | (°C)      |
| 30/04/2019                 | 015      | 18.7      | 15.0      |
| 01/05/2019                 | 054      | 22.9      | 14.2      |
| 02/05/2019                 | 002      | 23.1      | 15.3      |

### Weather forecast valid up to 8<sup>th</sup> May 2019

- Probability of light to heavy rainfall
- Max temp may be varying from 17-21°C, whereas, Min temp may vary from 13-14°C
- Sky will remain generally cloudy to cloudy
- Max RH is likely to be 86-93%, whereas, Min RH may var from 78-87 %
- Wind speed may likely vary from 3-5 km/hr.
- Wind direction may blow from northerly to easterly and finally to northeasterly
- Weekly cumulative rainfall= 182 mm
- **Heavy Rain very likely to occur at one or two places with Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Friday and Saturday.**

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

| Parameter/Date       | 04/05/2019        | 05/05/2019     | 06/05/2019      | 07/05/2019          | 08/05/2019          |
|----------------------|-------------------|----------------|-----------------|---------------------|---------------------|
| Rainfall (mm)        | Moderate rainfall | Heavy rainfall | Light rainfall  | Very light rainfall | Very light rainfall |
| Max Temp (°C)        | 22                | 21             | 22              | 24                  | 25                  |
| Min Temp (°C)        | 17                | 15             | 16              | 17                  | 17                  |
| Sky condition        | Cloudy            | Cloudy         | Partially clear | Partially clear     | Partially clear     |
| Max RH (%)           | 91                | 91             | 88              | 86                  | 84                  |
| Min RH (%)           | 85                | 85             | 82              | 81                  | 80                  |
| Wind Speed (Kmph)    | 5                 | 5              | 4               | 4                   | 3                   |
| Wind Direction (deg) | N                 | 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<br>(mm) | Max. Temp<br>(°C) | Min. Temp<br>(°C) |
| 30/04/2019                 | 000              | 25.0              | 14.0              |
| 01/05/2019                 | 001              | 27.0              | 15.0              |
| 02/05/2019                 | 000              | 27.5              | 15.0              |

### Weather forecast valid up to 8<sup>th</sup> May 2019

- There will be chances of light rainfall to moderate rainfall
- Max temp may be varying from 21-25°C, whereas, Min temp may vary from 15-17°C
- Sky will remain partially clear
- Max RH is likely to be 84-91 %, whereas, Min RH may var from 80-85 %
- Wind speed may likely vary from 3-5 km/hr.
- Wind direction may blow from northerly to northeasterly
- Weekly cumulative rainfall= 108 mm
- *Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Friday and Heavy Rain very likely to occur at one or two places with Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Saturday.*

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

| Parameter/Date       | 04/05/2019     | 05/05/2019        | 06/05/2019       | 07/05/2019      | 08/05/2019          |
|----------------------|----------------|-------------------|------------------|-----------------|---------------------|
| Rainfall (mm)        | Heavy rainfall | Moderate rainfall | Light rainfall   | Light rainfall  | Very light rainfall |
| Max Temp (°C)        | 20             | 18                | 20               | 22              | 23                  |
| Min Temp (°C)        | 15             | 13                | 14               | 16              | 16                  |
| Sky condition        | Cloudy         | Cloudy            | Generally cloudy | Partially clear | Partially clear     |
| Max RH (%)           | 93             | 93                | 90               | 89              | 87                  |
| Min RH (%)           | 87             | 87                | 84               | 79              | 78                  |
| Wind Speed (Kmph)    | 6              | 6                 | 5                | 4               | 3                   |
| Wind Direction (deg) | S              | NW                | NW               | NW              | NW                  |

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<br>(mm) | Max. Temp<br>(°C) | Min. Temp<br>(°C) |
| 30/04/2019                 | N/A              | 22.3              | 14.9              |
| 01/05/2019                 | 000              | 24.6              | 15.2              |
| 02/05/2019                 | 008              | 24.2              | 14.9              |


### Weather forecast valid up to 8<sup>th</sup> May 2019

- Probability of light to moderate rainfall
- Max temp may be varying from 18-23°C, whereas, Min temp may vary from 13-15°C
- Sky will remain generally cloudy
- Max RH is likely to be 87-93 %, whereas, Min RH may var from 78-87 %
- Wind speed may likely vary from 3-6 km/hr.
- Wind direction may blow to Northerly to northwesterly
- Weekly cumulative rainfall= 21 mm
- **Heavy Rain very likely to occur at one or two places with Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Friday and Thunderstorm with lightning and gusty winds (reaching 40-50 kmph) on Saturday.**

## AGRO-METEOROLOGICAL 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/<br>Pest/ Diseases | Agro-Met Advisories   |
|---|---|---------------------------------------|---|
| <b><i>Agricultural and Horticultural crops:</i></b> |   |                                       |   |
| Maize   | Land preparation and sowing<br><br>Maize at its Knee hight stage |                                       | <ul style="list-style-type: none"> <li>◆ Maize sowing should be done at 5-6 cm depth with a spacing of 60 cm × 20 cm (row × plant )</li> <li>◆ Provide adequate drainage facilities</li> <li>◆ Apply dolomite @ 0.5 t/ha in furrows</li> <li>◆ 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</li> </ul> |
| Buckwheat   | Harvesting  |                                       | <ul style="list-style-type: none"> <li>◆ Should done at physiological maturity</li> </ul>   |
| Mustard/Toria                                       | Harvesting  |                                       | <ul style="list-style-type: none"> <li>◆ Should done at physiological maturity</li> </ul>   |
| Ginger  | Field preparation   |                                       | <ul style="list-style-type: none"> <li>◆ Identify healthy plants for seed rhizomes.</li> <li>◆ Selected rhizomes for planting material should be kept in partial shade for better sprouting.</li> <li>◆ Store the seed rhizome in the pit for a month to break the dormancy</li> <li>◆ Forest litter should be collected well in advance as mulching material.</li> </ul>                       |

|  |                              |  |  |
|--|------------------------------|--|--|
|  |                              |  | <ul style="list-style-type: none"> <li>◆ Apply well decomposed FYM @ 20-25 t/ha + 1.0 t/ha neem cake and mix properly with soil 7-10 days before sowing.</li> <li>◆ Broadcast dolomite @ 2 t/ha before sowing and mix properly with soil.</li> </ul>   |
| Large cardamom   | Post-harvest crop management |  | <ul style="list-style-type: none"> <li>◆ Regular monitoring for pest and disease incidence.</li> <li>◆ Shade management with the proper lopping of trees.</li> </ul>   |
| Early kharif vegetables                                | Land preparation and Sowing  |  | <ul style="list-style-type: none"> <li>◆ Seed sowing of okra, beans etc. can be done</li> </ul>  |
| Pea  | Pod maturity, harvesting     |  | <ul style="list-style-type: none"> <li>◆ Soil moisture should be maintained for good yield.</li> <li>◆ Harvest the fully developed pod in early morning.</li> <li>◆ For green pods of pea, pick/harvest at 4-5 days interval so as to stimulate generation of new flowers.</li> <li>◆ Cautious picking should be done to avoid plant damage</li> </ul>   |
| Tomato/Red cherry pepper/Brinjal                       | Transplanting                | Fruit borer/<br>white fly/ late blight | <ul style="list-style-type: none"> <li>◆ Nursery should prepare at 15 cm of height with 1 m width and length as per farmers convenience.</li> <li>◆ 25-28 days old seedlings should be planted at 60 cm × 45 cm</li> <li>◆ Bed should be prepared to a fine tilth by mixing well decomposed FYM @ 5 kg/m<sup>2</sup> and vermicompost @ 150 g/m<sup>2</sup> incubated with 1% <i>Trichoderma viride</i> for management of soil borne diseases.</li> <li>◆ Use biodegradable polyfilm for mulching</li> </ul> |
| Sikkim Mandarin  | Vegetative flush             |  | <ul style="list-style-type: none"> <li>◆ Basin maintenance and manuring with FYM @ 30-35 kg/tree should be done. Avoid application of FYM close to the trunk.</li> <li>◆ Tree trunk should be painted with Bordeaux mixture @ 1%.</li> </ul>   |
| <b><i>Animal Sciences and livestock management</i></b> |                              |  |  |
| 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.</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 12 hr after observation of heat.</li> <li>◆ Breeding of the sheep/goat should be done 24-30 hr after observation of heat.</li> <li>◆ Feeding of concentrate feed along with jaggery, mineral mixture and salt.</li> <li>◆ Periodic application of fly repellents and/or netting of dung pit are recommended.</li> </ul>  |
| Cattle         |  |                               | <ul style="list-style-type: none"> <li>◆ 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.</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. Afterwards complete milking in a 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.</li> <li>◆ Inclusion of turmeric powder @ 10g/kg 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 at 5-7 days and at 28-30 days of age.</li> <li>◆ Calcium/shell grit and multi vitamin supplementation is strongly</li> </ul> |



|     |            |             |  |
|-----|------------|-------------|--|
|     |            |             | <p>recommended to optimize egg production.</p> <ul style="list-style-type: none"> <li>◆ Spraying of ectoparasiticides viz., deltamethrin/cypermethrin @ 1% v/v in water.</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>◆ Feed 5-10% green fodder of their diet.</li> </ul> |

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

| <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> | Metrological observer          | Biochemistry        |