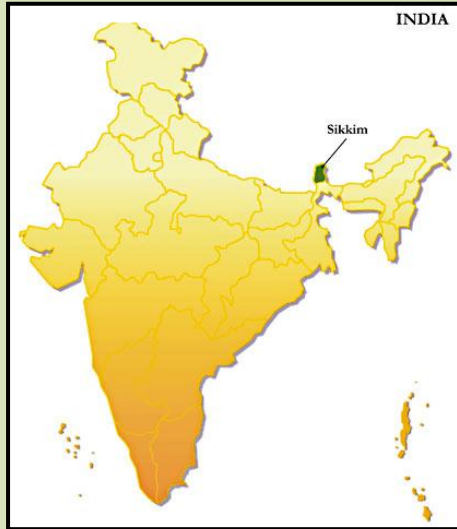




# STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 07<sup>TH</sup> NOVEMBER TO 09<sup>TH</sup> NOVEMBER'2017



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



**ISSUED ON TUESDAY 07<sup>TH</sup> NOVEMBER'2017**

## **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

| Mangan (PTO) |               |                |                | North Sikkim Forecast |              |               |               |               |               |
|--------------|---------------|----------------|----------------|-----------------------|--------------|---------------|---------------|---------------|---------------|
| Date         | Rainfall (mm) | Max. Temp (°C) | Min. Temp (°C) | Day →<br>Parameter ↓  | Day 1        | Day 2         | Day 3         | Day 4         | Day 5         |
|              |               |                |                | Sky Condition         | Mainly Clear | Partly Cloudy | Partly Cloudy | Partly Cloudy | Partly Cloudy |
| 3-11-2017    | 000           | 24.3           | 15.4           | Rainfall              | No rain      | No rain       | No rain       | No rain       | No rain       |
| 4-11-2017    | 000           | 24.1           | 13.4           | Wind (Speed/ Dir)     | 4Km/Hr (SSE) | 4Km/Hr (SSE)  | 3Km/Hr (SE)   | 3Km/Hr (SSE)  | 4Km/Hr (S)    |
| 5-11-2017    | 000           | 23.2           | 14.2           | Temperature (Min-Max) | 14 - 24°C    | 14 - 24°C     | 14 - 23°C     | 14 - 23°C     | 14 - 23°C     |
| 6-11-2017    | 000           | 23.3           | 13.2           | RH (Min-Max)          | 57 - 75%     | 58 - 75%      | 58 - 76%      | 60 - 77%      | 60 - 77%      |

| Gangtok   |               |                |                | East Sikkim Forecast  |              |              |              |               |               |
|-----------|---------------|----------------|----------------|-----------------------|--------------|--------------|--------------|---------------|---------------|
| Date      | Rainfall (mm) | Max. Temp (°C) | Min. Temp (°C) | Day →<br>Parameter ↓  | Day 1        | Day 2        | Day 3        | Day 4         | Day 5         |
|           |               |                |                | Sky Condition         | Mainly Clear | Mainly Clear | Mainly Clear | Partly Cloudy | Partly Cloudy |
| 3-11-2017 | 000           | 20.3           | 11.4           | Rainfall              | No rain      | No rain      | No rain      | No rain       | No rain       |
| 4-11-2017 | 000           | 20.1           | 12.1           | Wind (Speed/ Dir)     | 2Km/Hr (ENE) | 3Km/Hr (NE)  | 3Km/Hr (ENE) | 2Km/Hr (E)    | 2Km/Hr (E)    |
| 5-11-2017 | 000           | 20.0           | 12.4           | Temperature (Min-Max) | 12 - 20°C    | 12 - 20°C    | 11 - 19°C    | 11 - 19°C     | 11 - 19°C     |
| 6-11-2017 | 000           | 20.3           | 11.8           | RH (Min-Max)          | 54 - 72%     | 54 - 72%     | 56 - 74%     | 56 - 75%      | 55 - 76%      |

| <b>Namthang</b> |               |                |                | <b>South Sikkim Forecast</b> |             |              |              |            |              |
|-----------------|---------------|----------------|----------------|------------------------------|-------------|--------------|--------------|------------|--------------|
| Date            | Rainfall (mm) | Max. Temp (°C) | Min. Temp (°C) | Day →<br>Parameter ↓         | Day 1       | Day 2        | Day 3        | Day 4      | Day 5        |
|                 |               |                |                | Sky Condition                | Cloudy      | Cloudy       | Cloudy       | Cloudy     | Cloudy       |
| 3-11-2017       | 000           | 25.5           | 16.0           | Rainfall                     | No rain     | No rain      | No rain      | No rain    | No rain      |
| 4-11-2017       | 000           | 29.5           | 18.0           | Wind (Speed/ Dir)            | 2Km/Hr (NE) | 2Km/Hr (ENE) | 2Km/Hr (ENE) | 2Km/Hr (E) | 3Km/Hr (ESE) |
| 5-11-2017       | 000           | 24.0           | 20.5           | Temperature (Min-Max)        | 15 - 25°C   | 15 - 25°C    | 16 - 25°C    | 16 - 24°C  | 16 - 24°C    |
| 6-11-2017       | 000           | 24.5           | 13.0           | RH (Min-Max)                 | 9 - 50%     | 8 - 50%      | 12 - 52%     | 14 - 55%   | 14 - 55%     |

| <b>Gyalshing (AWS)</b> |               |                |                | <b>West Sikkim Forecast</b> |              |              |               |               |               |
|------------------------|---------------|----------------|----------------|-----------------------------|--------------|--------------|---------------|---------------|---------------|
| Date                   | Rainfall (mm) | Max. Temp (°C) | Min. Temp (°C) | Day →<br>Parameter ↓        | Day 1        | Day 2        | Day 3         | Day 4         | Day 5         |
|                        |               |                |                | Sky Condition               | Mainly Clear | Mainly Clear | Partly Cloudy | Partly Cloudy | Partly Cloudy |
| 3-11-2017              | N/A           | N/A            | N/A            | Rainfall                    | No rain      | No rain      | No rain       | No rain       | No rain       |
| 4-11-2017              | N/A           | N/A            | N/A            | Wind (Speed/ Dir)           | 2Km/Hr (E)   | 3Km/Hr (W)   | 3Km/Hr (W)    | 2Km/Hr (W)    | 3Km/Hr (W)    |
| 5-11-2017              | N/A           | N/A            | N/A            | Temperature (Min-Max)       | 13 - 21°C    | 13 - 21°C    | 12 - 20°C     | 12 - 20°C     | 12 - 20°C     |
| 6-11-2017              | N/A           | N/A            | N/A            | RH (Min-Max)                | 55 - 74%     | 55 - 75%     | 58 - 75%      | 58 - 75%      | 58 - 76%      |

## Part II

### AGRO-METEOROLOGICAL ADVISORIES

- ✦ Spraying of plant protection biopesticides on bright sunny day for insect and disease management is recommended.
- ✦ Nursery should be raised for early season cole crops (cabbage, cauliflower, broccoli), onion, raya saag etc. under protected condition.
- ✦ Provide adequate drainage to avoid water logging in ginger, turmeric .
- ✦ Vermicompost pits should be covered with gunny bags / weed biomass/ dry forest litter/ domestic and farm waste and kept moist by providing water at weekly interval.
- ✦ Avoid feeding of damp and foul smelling feed to all livestock and poultry.
- ✦ FMD Vaccination is strongly recommended for all livestock. Farmers may please contact nearest veterinary hospital/institution/V.O. for the vaccination
- ✦ De-worming with Fenbendazole @ 10 mg / kg body weight.
- ✦ Keep the Vanaraja chicks in warm condition (32-33°C at chick height) during the first four weeks. The floor should be covered with paddy husk (15 cm). Newspaper should be spread over the paddy husk during first 3-4 days. Starter feed should be spread over the newspaper.
- ✦ Regular raking of the floor litter should be done at an interval of 10 days. Lime powder application is recommended to prevent dampness. Excessive moist floor litter materials should be removed and replaced with fresh materials.
- ✦ Regular vaccination of Vanaraja birds: Lasota vaccine; 5-7 day old chicks in one eye. IBD vaccine; orally or in drinking water on 16 and 26 day old chicks. Lasota vaccine: 30 day old chicks in one eye.
- ✦ Sufficient green fodder should be provided to all livestock or allow range grazing to maintain proper productive and reproductive performance.

| Name of the crop/Animal | Stage                        | Pest/ Disease            | Agro-Met Advisories  |
|-------------------------|------------------------------|--------------------------|--|
| <b>Crops</b>            |                              |                          |  |
| Rice                    | Reproductive                 | Gandhi bug<br>Neck Blast | <ul style="list-style-type: none"><li>◆ Spray neem based formulation (1500ppm) @ 3ml per litre of water for controlling leaf folder.</li><li>◆ Proper soil moisture should be maintained up to grain filling stage.</li><li>◆ Spray with copper oxychloride @ 0.25 % or Bordeaux mixture @ 1% for the management of neck blast at 10-15 days interval.</li></ul> |
| Black gram              | Pod formation and harvesting | Blister Beetle           | <ul style="list-style-type: none"><li>◆ Harvesting should be done when pod turns pale yellow colour.</li><li>◆ Collection and destruction of Blister beetles and spraying of Neem oil @3ml/lit should be done.</li></ul>   |

|  |                                |  |  |
|--|--------------------------------|--|--|
| Finger millet                          | Grain formation and Harvesting |  | <ul style="list-style-type: none"> <li>◆ Regular field monitoring should be done.</li> </ul>   |
| Rice bean                              | pod formation                  | Blister Beetle<br>Legume pod borer     | <ul style="list-style-type: none"> <li>◆ Proper staking should be done.</li> <li>◆ Collection and destruction of Blister beetles and spraying of Neem oil @3ml/lit should be done.</li> </ul>  |
| Soybean                                | Pod development and harvesting |  | <ul style="list-style-type: none"> <li>◆ Uproot diseased plants.</li> <li>◆ Harvesting should be done when pod turns pale yellow colour.</li> </ul>  |
| Tomato                                 | Flowering/<br>fruiting         | Fruit borer/ white fly/<br>late blight | <ul style="list-style-type: none"> <li>◆ Application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre for management of aphids, white fly <i>etc.</i> at 15 days interval for 2-3 times.</li> <li>◆ Installation of sex pheromone traps @ 2-3 traps/1000 sqm.</li> <li>◆ Removal of infected leaves/ plant and drenching/ spray with copper oxychloride @ 0.25 % or Bordeaux mixture @ 1%.</li> <li>◆ Harvesting of mature green tomato should be done for distant market and pinkish/ reddish for local market.</li> </ul> |
| Red cherry pepper/Dalley chilli        | Flowering/<br>fruiting         | Aphid/ white fly/fruit fly             | <ul style="list-style-type: none"> <li>◆ Drenching with COC @ 0.25% at 7-10 days interval for management of root rot.</li> <li>◆ Application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre for management of aphids, white fly <i>etc.</i> at 15 days interval for 2-3 times.</li> <li>◆ Collection and destruction of infested fruit.</li> <li>◆ Installation of para pheromone trap (cue lure) @ 16-20 traps/ha. Regular harvesting</li> </ul>   |
| Gourds (Bottle/ bitter/ sponge/ ridge) | Flowering/<br>fruiting         | Fruit fly                              | <ul style="list-style-type: none"> <li>◆ Proper drainage should be maintained.</li> <li>◆ Collection and destruction of infested fruit.</li> <li>◆ Installation of para pheromone trap (cue lure) @ 16-20 traps/ha.</li> <li>◆ Regular harvesting should be done to improve the yield.</li> </ul>  |

|                                 |                                       |   |  |
|---------------------------------|---------------------------------------|---|--|
| Okra<br>Cucurbitaceous<br>crops | Flowering/<br>fruiting/<br>harvesting | Blister beetle/ fruit<br>fly                                | <ul style="list-style-type: none"> <li>◆ Proper drainage should be ensured.</li> <li>◆ Regular monitoring, collection and destruction of beetles.</li> <li>◆ Install pheromone traps @ 16-20 traps/ha for control of fruit fly. The lure has to be replaced at every 20 days interval.</li> <li>◆ Collect and destroy the infected fruits.</li> </ul>  |
| Large<br>cardamom               | After Harvesting                      | -   | <ul style="list-style-type: none"> <li>◆ Apply well decomposed FYM @ 2kg/ vermicompost @ 200g and neem cake @ 150g per clump.</li> <li>◆ Removal and burying of blight infected leaves.</li> <li>◆ Weeding/ removal of infected tillers should be done.</li> <li>◆ Removal of infected leaves/ plant and spray with copper oxychloride @ 0.25 %.</li> </ul>  |
| Ginger                          | Seed rhizome                          |   | <ul style="list-style-type: none"> <li>◆ Identify healthy plants for seed rhizomes.</li> </ul>   |
| Sikkim<br>mandarin              | Fruit maturity                        | Trunk borer/ leaf<br>miner, scab, aphid<br>and felt disease | <ul style="list-style-type: none"> <li>◆ Tree trunk should be painted with 1% Bordeaux paste.</li> <li>◆ Plant basin should be kept weed free.</li> <li>◆ For leaf miner and aphids management, application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre at 15 days interval for 2-3 times is recommended.</li> <li>◆ Spray COC @ 0.25% after removing the infected branches</li> <li>◆ Regular monitoring for detection of trunk borer infestation at the base of the trunk is advised. If wooden frass is observed, cleaning and insertion of cotton soaked in kerosene and plastered with clay and cowdung mixture.</li> </ul> |
| Kiwifruit                       | Fruit maturity                        |   | <ul style="list-style-type: none"> <li>◆ Preventive measures should be taken to avoid bird and squirrel damage.</li> </ul>   |
| <b>Animal Sciences</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>  |
| Cattle, 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<sup>th</sup> day and at 30<sup>th</sup> day 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 8-10 week 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> |