

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

#### 3rd AUGUST to 7th AUGUST' 2019







### ISSUED ON 2<sup>nd</sup> August 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

#### **Value Added forecast for NORTH-DISTRICT for next five days**

| <b>↓Parameter/Date</b> →   | 03/08/2019       | 04/08/2019     | 05/08/2019     | 06/08/2019     | 07/08/2019     |
|----------------------------|------------------|----------------|----------------|----------------|----------------|
| Rainfall (mm)              | Light rainfall   | Light rainfall | Light rainfall | Light rainfall | Light rainfall |
| Max Temp ( <sup>0</sup> C) | 29               | 30             | 30             | 31             | 31             |
| Min Temp ( <sup>0</sup> C) | 20               | 20             | 20             | 21             | 21             |
| Sky condition              | Generally cloudy | Light rainfall | Cloudy         | Light rainfall | Light rainfall |
| Max RH (%)                 | 92               | 92             | 93             | 93             | 90             |
| Min RH (%)                 | 85               | 85             | 86             | 85             | 84             |
| Wind Speed (KmpH)          | 3                | 4              | 3              | 3              | 4              |
| Wind Direction (deg)       | SE               | S              | SE             | E              | SE             |

Northerly- N, North-Easterly- E, South-Easterly- S, South-Westerly- S, South-Westerly- N, Westerly- N, North-westerly- N, North

| Weather for preceding week |          |           |           |  |
|----------------------------|----------|-----------|-----------|--|
| Date                       | Rainfall | Max. Temp | Min. Temp |  |
|                            | (mm)     | (°C)      | (°C)      |  |
| 30/7/2019                  | 000      | N/A       | 19.3      |  |
| 31/7/2019                  | 000      | 30.5      | 19.8      |  |
| 01/8/2019                  | 016      | 30.2      | 19.6      |  |

- Probability of Light rainfall
- Max temp may be varying from 29-31°C, whereas, Min temp may vary from 20-21°C
- > Sky will remain generally cloudy
- Max RH is likely to be 90-93 %, whereas, Min RH may vary from 84-86 %
- > Wind speed may likely vary from 3-4 km/hr.
- > Wind direction may blow from southeasterly to southerly and then again southeasterly to easterly and finally to southeasterly
- > Weekly cumulative rainfall=52 mm

- **▶** 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 pr<br>Pest/ Dis |                   | Agro-Met Advisories   |
|-------------------------|-------------------------------|--------------------------|-------------------|---|
|                         | Agricu                        | iltural and H            | <i>lorticultu</i> | iral crops:   |
| Maize                   | Knee height                   | t stage                  | Army<br>worm      | <ul> <li>♦ Field should be weed free without damaging the main crop while uprooting the weeds.</li> <li>♦ Two foliar spray of neem based formulation (1500ppm) @ 0.5% or 5 ml/lit. of water at weekly interval</li> <li>♦ Avoid weeding during tasseling stage</li> <li>♦ Keep drainage facilities in field</li> <li>♦ Regular inspection of field for insect pest infestation</li> <li>♦ The harvested cobs should be well dry at moisture content at 10-12 %</li> <li>♦ Use bird scarer for the control of birds</li> </ul> |
| Rice                    | Main field prepa<br>transplan |                          |                   | Start field preparation for paddy transplantation through repairing old bunds by maintaining 20-30 cm   |

|                              |                   |        |   | 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 |
|------------------------------|-------------------|--------|---|---|
| Cingon                       | Tilloring stage   |        | <b>♦</b> (  | or in combination should be applied at 10 days before transplanting  Green manuring with <i>dhaincha</i> (susbania aculeata) can be incorporated  |
| Ginger/ Turmeric             | Tillering stage   |        |   | 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<br>cardamom            | Planting          |        |   | A 2 years old nursery suckers should be planted in the main field A spacing of 1.8×1.8 m <sup>2</sup> should be maintained. Young white coloured roots should not be destroy while planting, while old roots should trimmed out.  |
| Early kharif vegetables      | Vegetative growth |        |   | Weeding and intercultural operation should be done  |
| Red cherry<br>pepper/Brinjal | Vegetative        | Blight | <ul><li>♦ 5</li><li>• 5</li><li>• 7</li><li>• 7</li></ul> | 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/<br>Tomato | Nursery preparation   |           | <b>\limits</b>                                  | Start preparation of nursery beds for early and late kharif tomato         |
|-----------------------|-----------------------|-----------|---|--|
| Tomato                |                       |           | <b>\oint{\oint}</b>                             | 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/m <sup>2</sup> , neem cake @                |
|                       |                       |           | ~   | 200 g/m <sup>2</sup> , Trichoderma@ 1 % should                             |
|                       |                       |           |   | be incorporated in soil during nursery                                     |
|                       |                       |           |   | bed preparation.   |
|                       |                       |           | <b>*</b>  | Nursery bed should be prepared   |
|                       |                       |           |   | inside the poly tunnel/rain shelter  |
| C:1-1-1               | Dlantin a/fmitin a    |           |   | system.  |
| Sikkim<br>Mandarin    | Planting/fruiting     |           |   | Keep the orchard weed free  Digging the pit of 3 feet × 3 feet × 3         |
|                       |                       |           | •   | feet for transplanting new saplings  |
|                       |                       |           | <b>\oint\oint\oint\oint\oint\oint\oint\oint</b> | Top soil of the pit should be mixed  |
|                       |                       |           |   | with FYM @20 kg/pit  |
|                       | Animal Sciences and I | livestock | ma  | nnagement  |
| Tibetan Sheep         |                       |           | <b>*</b>  | Feeding of concentrate feed along  |
|                       |                       |           |   | with mineral mixture and salt.   |
| 37.1                  |                       |           |   | Hay feeding is recommended.  |
| Yak                   |                       |           | ~   | Feeding of concentrate feed along with mineral mixture and salt.           |
|                       |                       |           | <b>*</b>  | Hay feeding is recommended.  |
|                       |                       |           | <b>\oint\oint\oint\oint\oint\oint\oint\oint</b> | Trimming of hair is recommended  |
|                       |                       |           |   | during summer season   |
| Sheep and Goat        |                       |           |   | 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   |
|                       |                       |           | <b>*</b>  | Breeding of the sheep/goat should be                                       |
|                       |                       |           |   | done 24-30 hr. after onset of heat.  |
|                       |                       |           | <b>*</b>  | Feeding of concentrate feed along  |
|                       |                       |           |   | with jaggery, mineral mixture and salt                                     |
|                       |                       |           | <u> </u>  | is recommended.  |
|                       |                       |           | <b>W</b>  | Periodic application of fly repellents and/or netting of dung pit is       |
|                       |                       |           |   | recommended.   |
| Cattle                |                       |           | <b>\lambda</b>                                  | Balanced feeding of dairy animals  |
|                       |                       |           |   | and allow calf suckling immediately  |
|                       |                       |           |   | after parturition is recommended.  |
|                       |                       |           |   | 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.  Later on, complete milking in subsequent day is recommended.  |
|---------|------------|---|---|--|
| Poultry |            | Coccidi<br>osis,<br>Ranikh<br>et<br>disease |   | 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 viz., deltamethrin/cypermethrin @ 1% v/v in water is recommended. |
| Pig     | All stages | Swine<br>fever                              |   | 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 BULLETIN FOR THE DISTRICT OF EAST SIKKIM

#### PERIOD:





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





#### ISSUED ON 2nd August 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

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

| <b>↓Parameter/Date</b> →   | 03/08/2019       | 04/08/2019       | 05/08/2019     | 06/08/2019       | 07/08/2019       |
|----------------------------|------------------|------------------|----------------|------------------|------------------|
| Rainfall (mm)              | Light rainfall   | Light rainfall   | Light rainfall | Light rainfall   | Light rainfall   |
| Max Temp ( <sup>0</sup> C) | 22               | 23               | 23             | 24               | 24               |
| Min Temp ( <sup>0</sup> C) | 18               | 18               | 18             | 19               | 19               |
| Sky condition              | Generally cloudy | Generally cloudy | Cloudy         | Generally cloudy | Generally cloudy |
| Max RH (%)                 | 92               | 90               | 93             | 92               | 90               |
| Min RH (%)                 | 85               | 83               | 86             | 85               | 83               |
| Wind Speed (KmpH)          | 2                | 2                | 2              | 3                | 3                |
| Wind Direction (deg)       | NE               | NE               | S              | S                | S                |

Northerly- N, North-Easterly- E, South-Easterly- S, South-Westerly- S, South-Westerly- N, Westerly- N, North-westerly- N, North

|                                  | Weather for preceding week |      |      |  |  |
|----------------------------------|----------------------------|------|------|--|--|
| Date Rainfall Max. Temp Min. Tem |                            |      |      |  |  |
|                                  | (mm)                       | (°C) | (°C) |  |  |
| 30/7/2019                        | 027                        | 21.8 | 17.0 |  |  |
| 31/7/2019                        | 003                        | 23.2 | 17.4 |  |  |
| 01/8/2019                        | 005                        | 22.2 | 17.6 |  |  |

- > Probability of light rainfall
- > Max temp may be varying from 22-24°C, whereas, Min temp may vary from 18-19°C
- > Sky will remain generally cloudy
- Max RH is likely to be 90-93 %, whereas, Min RH may vary from 83-86 %
- > Wind speed may likely vary from 2-3 km/hr.
- > Wind direction may blow from then northeasterly to southerly
- > Weekly cumulative rainfall= 52 mm

- **▶** 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 property Pest/ Dis |              | Agro-Met Advisories   |
|-------------------------|---------------------------------------|-----------------------------|--------------|---|
|                         | Agricultural and Horticultural crops: |                             |              |   |
| Maize                   | Knee heigh                            | t stage                     | Army<br>worm | <ul> <li>♦ Field should be weed free without damaging the main crop while uprooting the weeds.</li> <li>♦ Two foliar spray of neem based formulation (1500ppm) @ 0.5% or 5 ml/lit. of water at weekly interval</li> <li>♦ Avoid weeding during tasseling stage</li> <li>♦ Keep drainage facilities in field</li> <li>♦ Regular inspection of field for insect pest infestation</li> <li>♦ The harvested cobs should be well dry at moisture content at 10-12 %</li> <li>♦ Use bird scarer for the control of birds</li> </ul> |
| Rice                    | Main field prepa<br>transplan         |                             |              | Start field preparation for paddy transplantation through repairing old bunds by maintaining 20-30 cm   |

|  |                               |        | height in lowland situation  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 dhaincha |
|--|-------------------------------|--------|--|
| Ginger/<br>Turmeric                                | Tillering stage               |        | <ul> <li>(susbania aculeata) can be incorporated</li> <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<br>cardamom                                  | Planting                      |        | <ul> <li>A 2 years old nursery suckers should be planted in the main field</li> <li>A spacing of 1.8×1.8 m² 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  Red cherry pepper/Brinjal | Vegetative growth  Vegetative | Blight | <ul> <li>Weeding and intercultural operation should be done</li> <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/l lit. of weekly interval for controlling of <i>Aphids</i></li> </ul>  |

| Cole crops/        | Nursery preparation   |           | <b>*</b>       | Start preparation of nursery beds for                                      |
|--------------------|-----------------------|-----------|----------------|--|
| Tomato             |                       |           |                | 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/m <sup>2</sup> , neem cake @                                |
|                    |                       |           |                | 200 g/m <sup>2</sup> , Trichoderma@ 1 % should                             |
|                    |                       |           |                | be incorporated in soil during nursery                                     |
|                    |                       |           |                | bed preparation.   |
|                    |                       |           | <b>*</b>       | Nursery bed should be prepared   |
|                    |                       |           |                | inside the poly tunnel/rain shelter  |
| C:1-1-1            | Diogram of fruiting   |           |                | system.  |
| Sikkim<br>Mandarin | Planting/fruiting     |           | l .            | Keep the orchard weed free   |
| Mandarin           |                       |           | ~              | 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 I | livestock | ms             |  |
| Tibeten Chase      | Anima Sciences and I  |           | ma             |  |
| Tibetan Sheep      |                       |           | ~              | Feeding of concentrate feed along with mineral mixture and salt.           |
|                    |                       |           |                |  |
| Yak                |                       |           | <b>*</b>       | Hay feeding is recommended.  Feeding of concentrate feed along             |
| 1 ax               |                       |           | •              | with mineral mixture and salt.   |
|                    |                       |           |                | Hay feeding is recommended.  |
|                    |                       |           | <b>\langle</b> | Trimming of hair is recommended  |
|                    |                       |           |                | during summer season   |
| Sheep and Goat     |                       |           | <b>\limits</b> | 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  |
| Cottle             |                       |           |                | recommended.   |
| Cattle             |                       |           |                | Balanced feeding of dairy animals  |
|                    |                       |           |                | and allow calf suckling immediately  |
|                    |                       |           |                | after parturition is recommended.  |
|                    |                       |           |                | 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.  Later on, complete milking in subsequent day is recommended.  |
|---------|------------|---|---|--|
| Poultry |            | Coccidi<br>osis,<br>Ranikh<br>et<br>disease |   | 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 viz., deltamethrin/cypermethrin @ 1% v/v in water is recommended. |
| Pig     | All stages | Swine<br>fever                              |   | 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 BULLETIN FOR THE DISTRICT OF SOUTH SIKKIM PERIOD:

#### 3rd AUGUST to 7th AUGUST' 2019







### ISSUED ON 2<sup>nd</sup> August 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

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

| <b>↓Parameter/Date</b> →   | 03/08/2019       | 04/08/2019       | 05/08/2019       | 06/08/2019       | 07/08/2019       |
|----------------------------|------------------|------------------|------------------|------------------|------------------|
| Rainfall (mm)              | Light rainfall   |
| Max Temp ( <sup>0</sup> C) | 27               | 27               | 28               | 28               | 29               |
| Min Temp ( <sup>0</sup> C) | 18               | 18               | 19               | 19               | 19               |
| Sky condition              | Generally cloudy |
| Max RH (%)                 | 90               | 91               | 91               | 90               | 90               |
| Min RH (%)                 | 83               | 84               | 84               | 83               | 83               |
| Wind Speed (KmpH)          | 4                | 3                | 3                | 4                | 4                |
| Wind Direction (deg)       | N                | NE               | S                | S                | S                |

Northerly- N, North-Easterly- E, South-Easterly- S, South-Westerly- S, South-Westerly- N, Westerly- N, North-westerly- N, North

|                                   | Weather for preceding week |      |      |  |  |
|-----------------------------------|----------------------------|------|------|--|--|
| Date Rainfall Max. Temp Min. Temp |                            |      |      |  |  |
|                                   | (mm)                       | (°C) | (°C) |  |  |
| 30/7/2019                         | 004                        | 27.3 | 18.6 |  |  |
| 31/7/2019                         | 002                        | 26.9 | 18.0 |  |  |
| 01/8/2019                         | 004                        | 26.8 | 18.6 |  |  |

- There will be chances of light rainfall
- > Max temp may be varying from 27-29°C, whereas, Min temp may vary from 18-19°C
- > Sky will remain generally cloudy
- Max RH is likely to be 90-91 %, whereas, Min RH may vary from 83-84 %
- > Wind speed may likely vary from 3-4 km/hr.
- > Wind direction may blow from northerly to northeasterly and then southerly
- > Weekly cumulative rainfall= 25 mm

- **▶** 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 property Pest/ Dis |              | Agro-Met Advisories   |
|-------------------------|---------------------------------------|-----------------------------|--------------|---|
| •                       | Agricultural and Horticultural crops: |                             |              |   |
| Maize                   | Knee heigh                            | t stage                     | Army<br>worm | <ul> <li>♦ Field should be weed free without damaging the main crop while uprooting the weeds.</li> <li>♦ Two foliar spray of neem based formulation (1500ppm) @ 0.5% or 5 ml/lit. of water at weekly interval</li> <li>♦ Avoid weeding during tasseling stage</li> <li>♦ Keep drainage facilities in field</li> <li>♦ Regular inspection of field for insect pest infestation</li> <li>♦ The harvested cobs should be well dry at moisture content at 10-12 %</li> <li>♦ Use bird scarer for the control of birds</li> </ul> |
| Rice                    | Main field prepa<br>transplan         |                             |              | Start field preparation for paddy transplantation through repairing old bunds by maintaining 20-30 cm   |

|  |                               |        | height in lowland situation  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 dhaincha |
|--|-------------------------------|--------|--|
| Ginger/<br>Turmeric                                | Tillering stage               |        | <ul> <li>(susbania aculeata) can be incorporated</li> <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<br>cardamom                                  | Planting                      |        | <ul> <li>A 2 years old nursery suckers should be planted in the main field</li> <li>A spacing of 1.8×1.8 m² 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  Red cherry pepper/Brinjal | Vegetative growth  Vegetative | Blight | <ul> <li>Weeding and intercultural operation should be done</li> <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/l lit. of weekly interval for controlling of <i>Aphids</i></li> </ul>  |

| Cole crops/<br>Tomato | Nursery preparation   |           | <b>\limits</b> | Start preparation of nursery beds for                                  |
|-----------------------|-----------------------|-----------|----------------|--|
| Tomato                |                       |           |                | early and late kharif tomato Use early varieties of cabbage (early     |
|                       |                       |           | Ť              | ball) cauliflower (white excel),                                       |
|                       |                       |           |                | broccoli (Aishwarya) and tomato  |
|                       |                       |           |                | (varieties Arka rakshak, Arka samrat,                                  |
|                       |                       |           |                | and All rounder  |
|                       |                       |           | <b>*</b>       | 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.   |
|                       |                       |           | <b>*</b>       | Nursery bed should be prepared   |
|                       |                       |           |                | inside the poly tunnel/rain shelter                                    |
| Sikkim                | Planting/fruiting     |           |                | system.  Keep the orchard weed free                                    |
| Mandarin              | T mining, it ditting  |           |                | Digging the pit of 3 feet × 3 feet × 3                                 |
|                       |                       |           |                | feet for transplanting new saplings                                    |
|                       |                       |           | <b>\limits</b> | Top soil of the pit should be mixed                                    |
|                       |                       |           |                | with FYM @20 kg/pit  |
|                       | Animal Sciences and I | livestock | ma             |  |
| Tibetan Sheep         |                       |           |                | Feeding of concentrate feed along                                      |
|                       |                       |           | _              | with mineral mixture and salt.   |
| Yak                   |                       |           | <b>*</b>       | Hay feeding is recommended.  |
| 1 ak                  |                       |           | ~              | Feeding of concentrate feed along with mineral mixture and salt.       |
|                       |                       |           |                | Hay feeding is recommended.  |
|                       |                       |           | <b>*</b>       | Trimming of hair is recommended  |
|                       |                       |           |                | during summer season   |
| Sheep and Goat        |                       |           | <b></b>        | 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.  |
|                       |                       |           | <b>\Pi</b>     | Periodic application of fly repellents                                 |
|                       |                       |           |                | and/or netting of dung pit is  |
|                       |                       |           |                | recommended.   |
| Cattle                |                       |           | <b>\lambda</b> | Balanced feeding of dairy animals                                      |
|                       |                       |           |                | and allow calf suckling immediately                                    |
|                       |                       |           |                | after parturition is recommended.                                      |
|                       |                       |           |                | 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.  Later on, complete milking in subsequent day is recommended.  |
|---------|------------|---|---|--|
| Poultry |            | Coccidi<br>osis,<br>Ranikh<br>et<br>disease |   | 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 viz., deltamethrin/cypermethrin @ 1% v/v in water is recommended. |
| Pig     | All stages | Swine<br>fever                              |   | 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   |

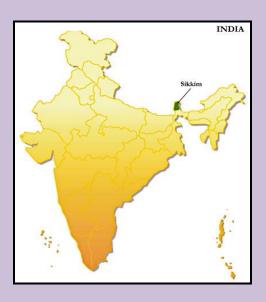


# AGRO-MET ADVISORY BULLETIN FOR THE DISTRICT OF WEST SIKKIM PERIOD:

#### 3rd AUGUST to 7th AUGUST' 2019



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





### ISSUED ON 2<sup>nd</sup> August 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

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

| <b>↓Parameter/Date→</b>    | 03/08/2019       | 04/08/2019       | 05/08/2019     | 06/08/2019       | 07/08/2019       |
|----------------------------|------------------|------------------|----------------|------------------|------------------|
| Rainfall (mm)              | Light rainfall   | Light rainfall   | Light rainfall | Light rainfall   | Light rainfall   |
| Max Temp ( <sup>0</sup> C) | 25               | 26               | 26             | 26               | 27               |
| Min Temp ( <sup>0</sup> C) | 18               | 18               | 18             | 18               | 19               |
| Sky condition              | Generally cloudy | Generally cloudy | Cloudy         | Generally cloudy | Generally cloudy |
| Max RH (%)                 | 92               | 90               | 93             | 92               | 92               |
| Min RH (%)                 | 85               | 83               | 86             | 85               | 85               |
| Wind Speed (KmpH)          | 3                | 3                | 3              | 4                | 4                |
| Wind Direction (deg)       | N                | N                | N              | N                | N                |

Northerly- N, North-Easterly- E, South-Easterly- S, South-Westerly- S, South-Westerly- N, Westerly- W, North-westerly- N-W.

|                                   | Weather for preceding week |      |      |  |  |
|-----------------------------------|----------------------------|------|------|--|--|
| Date Rainfall Max. Temp Min. Temp |                            |      |      |  |  |
|                                   | (mm)                       | (°C) | (°C) |  |  |
| 30/7/2019                         | 000                        | 25.4 | 16.8 |  |  |
| 31/7/2019                         | 000                        | 26.5 | 17.2 |  |  |
| 01/8/2019                         | 000                        | 26.0 | 17.3 |  |  |

- > Probability of light rainfall
- Max temp may be varying from 25-27°C, whereas, Min temp may vary from 18-19°C
- > Sky will remain generally cloudy
- Max RH is likely to be 90-93%, whereas, Min RH may vary from 83-86 %
- > Wind speed may likely vary from 3-4 km/hr.
- > Wind direction may blow from northerly
- > Weekly cumulative rainfall= 43 mm

- **▶** 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 property Pest/ Dis |              | Agro-Met Advisories   |
|-------------------------|---------------------------------------|-----------------------------|--------------|---|
| •                       | Agricultural and Horticultural crops: |                             |              |   |
| Maize                   | Knee heigh                            | t stage                     | Army<br>worm | <ul> <li>Field should be weed free without damaging the main crop while uprooting the weeds.</li> <li>Two foliar spray of neem based formulation (1500ppm) @ 0.5% or 5 ml/lit. of water at weekly interval</li> <li>Avoid weeding during tasseling stage</li> <li>Keep drainage facilities in field</li> <li>Regular inspection of field for insect pest infestation</li> <li>The harvested cobs should be well dry at moisture content at 10-12 %</li> <li>Use bird scarer for the control of birds</li> </ul> |
| Rice                    | Main field prepa<br>transplan         |                             |              | Start field preparation for paddy transplantation through repairing old bunds by maintaining 20-30 cm   |

|  |                               |        | height in lowland situation  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 |
|--|-------------------------------|--------|--|
| Ginger/<br>Turmeric                                | Tillering stage               |        | <ul> <li>♦ Green manuring with dhaincha (susbania aculeata) can be incorporated</li> <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> <li>A 2 years old nursery suckers should be planted in the main field</li> <li>A spacing of 1.8×1.8 m² 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  Red cherry pepper/Brinjal | Vegetative growth  Vegetative | Blight | <ul> <li>Weeding and intercultural operation should be done</li> <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/l lit. of weekly interval for controlling of <i>Aphids</i></li> </ul>  |

| Cole crops/    | Nursery preparation   |           | <b>\lambda</b> | Start preparation of nursery beds for   |
|----------------|-----------------------|-----------|----------------|---|
| Tomato         |                       |           |                | early and late kharif tomato  |
|                |                       |           | <b>\pi</b>     | Use early varieties of cabbage (early   |
|                |                       |           |                | ball) cauliflower (white excel),  |
|                |                       |           |                | broccoli (Aishwarya) and tomato   |
|                |                       |           |                | (varieties Arka rakshak, Arka samrat,   |
|                |                       |           |                | and All rounder   |
|                |                       |           | <b>*</b>       | 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.  |
|                |                       |           | <b>*</b>       | Nursery bed should be prepared  |
|                |                       |           |                | inside the poly tunnel/rain shelter   |
| Sikkim         | Planting/fruiting     |           |                | system.  Keep the orchard weed free   |
| Mandarin       | 1 lanting/fruiting    |           |                | Digging the pit of 3 feet× 3 feet × 3   |
|                |                       |           | Ť              | feet for transplanting new saplings   |
|                |                       |           | <b></b>        | Top soil of the pit should be mixed   |
|                |                       |           |                | with FYM @20 kg/pit   |
|                | Animal Sciences and I | livestock | má             | nnagement   |
| Tibetan Sheep  |                       |           | <b></b>        | Feeding of concentrate feed along   |
|                |                       |           |                | with mineral mixture and salt.  |
|                |                       |           |                | Hay feeding is recommended.   |
| Yak            |                       |           |                | Feeding of concentrate feed along   |
|                |                       |           |                | with mineral mixture and salt.  |
|                |                       |           | <b>*</b>       | Hay feeding is recommended.   |
|                |                       |           | <b>*</b>       | Trimming of hair is recommended   |
|                |                       |           |                | during summer season  |
| Sheep and Goat |                       |           | <b>*</b>       | 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         |                       |           | <b>\lambda</b> |   |
|                |                       |           |                | · ·   |
|                |                       |           |                |   |
|                |                       |           |                | Colostrum (first three days milk)   |
| Cattle         |                       |           | •              | Balanced feeding of dairy animals and allow calf suckling immediately after parturition is recommended. |

|         |            |         |                   | feeding to new born calf for first three                            |
|---------|------------|---------|-------------------|---|
|         |            |         |                   | days of life should be ensured.                                     |
|         |            |         | ~                 | Full hand milking should be   |
|         |            |         |                   | practiced.  Frequent incomplete milking at                          |
|         |            |         | ~                 | 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 |            | Coccidi | <b>\line{\pi}</b> | 16 hrs of light (natural and electrical)                            |
|         | 4          | osis,   |                   | should be provided to adult birds for                               |
|         |            | Ranikh  |                   | optimum egg production.   |
|         |            | et      |                   | Frequent raking and liming of deep                                  |
|         |            | disease |                   | 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 viz.,   |
|         |            |         |                   | deltamethrin/cypermethrin @ 1% v/v                                  |
|         |            |         |                   | in water is recommended.  |
| Pig     | All stages | Swine   |                   | Keep floor dry to avoid skin diseases.                              |
|         |            | fever   |                   | Weaning is recommended at the age                                   |
|         |            |         |                   | of 8 weeks for crossbreds and 10                                    |
|         |            |         |                   | weeks for indigenous pigs.  |
|         |            |         | <b>*</b>          | Swine fever vaccine at the age of 3                                 |
|         |            |         | _                 | months is recommended.  |
|         |            |         | <b>*</b>          | Critical heat detection in early                                    |
|         |            |         |                   | morning and late evening is   |
|         |            |         | _                 | recommended.  |
|         |            |         | <b>*</b>          | Farmers can incorporate low cost                                    |
|         |            |         |                   | locally available feed resources                                    |
|         |            |         |                   | (60%) for feeding pigs to reduce the                                |
|         |            |         |                   | cost of feeding   |