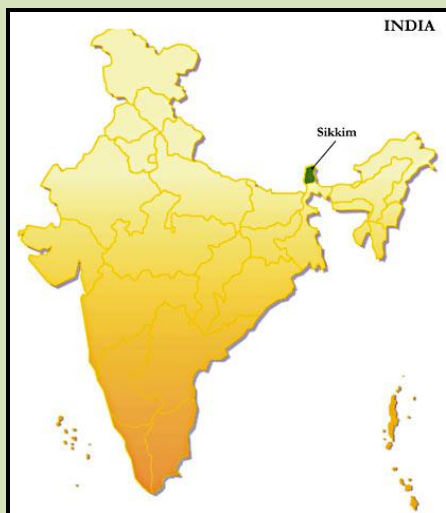




# STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 5<sup>th</sup> MAY'2015 – 7<sup>th</sup> MAY'2015



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



**ISSUED ON "TUESDAY 5<sup>TH</sup> MAY'2015**

## **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

Mangan (AWS)				North Sikkim Forecast					
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
1-5-2015	N/A	N/A	N/A	Rainfall	Light	Moderate	Moderate	Moderate	Light
2-5-2015	N/A	N/A	N/A	Wind (Speed/ Dir)	3Km/Hr (SW)	2Km/Hr (SW)	2Km/Hr (W)	4Km/Hr (SE)	3Km/Hr (E)
3-5-2015	N/A	N/A	N/A	Temperature (Min-Max)	16 - 28°C	16 - 27°C	16 - 26°C	15 - 26°C	15 - 26°C
4-5-2015	N/A	N/A	N/A	RH (Min-Max)	68 - 90%	72 - 92%	75 - 94%	74 - 93%	72 - 90%

Gangtok				East Sikkim Forecast					
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
1-5-2015	013	19.6	13.2	Rainfall	Light	Moderate	Moderate	Moderate	Light
2-5-2015	013	21.3	12.9	Wind (Speed/ Dir)	2Km/Hr (S)	2Km/Hr (SSE)	2Km/Hr (SSW)	3Km/Hr (E)	3Km/Hr (ENE)
3-5-2015	012	20.8	12.2	Temperature (Min-Max)	14 - 23°C	14 - 22°C	13 - 21°C	13 - 21°C	13 - 22°C
4-5-2015	008	22.3	14.5	RH (Min-Max)	72 - 94%	76 - 95%	77 - 95%	75 - 93%	72 - 91%

Namthang				South Sikkim Forecast					
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
1-5-2015	006	25.0	13.5	Rainfall	Very Light	Light	Light	Light	Very Light
2-5-2015	007	26.5	13.5	Wind (Speed/ Dir)	2Km/Hr (SSW)	3Km/Hr (S)	2Km/Hr (WSW)	3Km/Hr (E)	4Km/Hr (ENE)
3-5-2015	008	26.0	14.5	Temperature (Min-Max)	17 - 26°C	16 - 25°C	16 - 24°C	15 - 24°C	15 - 24°C
4-5-2015	005	26.5	17.4	RH (Min-Max)	74 - 90%	75 - 90%	78 - 94%	70 - 92%	68 - 90%

Gyalshing (AWS)				West Sikkim Forecast					
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
1-5-2015	002	21.7	13.3	Rainfall	Light	Light	Light	Light	Very Light
2-5-2015	003	N/A	14.0	Wind (Speed/ Dir)	3Km/Hr (WNW)	3Km/Hr (WSW)	2Km/Hr (WNW)	3Km/Hr (NE)	3Km/Hr (NE)
3-5-2015	N/A	N/A	N/A	Temperature (Min-Max)	14 - 24°C	14 - 24°C	13 - 23°C	13 - 23°C	13 - 23°C
4-5-2015	N/A	23.5	N/A	RH (Min-Max)	75 - 92%	77 - 94%	77 - 95%	72 - 93%	69 - 90%

## **PART II: CROP DATA**

### **Major standing crops:**

#### **North District:**

##### **(a) High hills (1500 to 2000 mt):**

- *Large Cardamom: Vegetative (Leg Phase)/ Primary Flowering/ Secondary Flowering;*
- *Maize: Sowing & Germination / Early Vegetative / Vegetative;*
- *Seed Potato: Tuberization;*
- *Summer Potato (Very High Hills): Vegetative / Tuberization;*
- *Kharif Vegetable: Transplantation / Vegetative;*

##### **(b) Medium hills (1000 to 1500 mt):**

- *Large Cardamom: Vegetative (Leg Phase) / Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*

##### **(c) Low Hills (Below 1000 mt):**

- *Large Cardamom: Vegetative (Leg Phase) / Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*



## East District:

### (a) High hills (1500 to 2000 mt):

- *Large Cardamom: Vegetative (Leg Phase)/ Primary Flowering/ Secondary Flowering;*
- *Maize: Sowing & Germination / Early Vegetative / Vegetative;*
- *Seed Potato: Tuberization;*
- *Summer Potato (Very High Hills): Vegetative / Tuberization;*
- *Kharif Vegetable: Transplantation / Vegetative;*

### (b) Medium hills (1000 to 1500 mt):

- *Large Cardamom: Vegetative (Leg Phase) / Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*

### (c) Low Hills (Below 1000 mt):

- *Large Cardamom: Vegetative (Leg Phase) / Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*

## South District:

### (a) High hills (1500 to 2000 mt):

- *Large Cardamom: Vegetative (Leg Phase)/ Primary Flowering/ Secondary Flowering;*
- *Maize: Sowing & Germination / Early Vegetative / Vegetative;*
- *Seed Potato: Tuberization;*
- *Summer Potato (Very High Hills): Vegetative / Tuberization;*
- *Kharif Vegetable: Transplantation / Vegetative;*

### (b) Medium hills (1000 to 1500 mt):

- *Large Cardamom: Vegetative (Leg Phase)/ Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*

### (c) Low Hills (Below 1000 mt):

- *Large Cardamom: Vegetative (Leg Phase)/ Primary Flowering/ Secondary Flowering;*
- *Maize: Vegetative / Late Vegetative/ Tasseling & Silking / Flowering & Cob-Filling;*
- *Orange: Flowering / Transplantation of Seedlings from Nursery;*
- *Rabi Potato: Maturity / Harvesting;*
- *Kharif Vegetable: Transplantation / Vegetative;*
- *Ginger: Sowing / Germination;*



## West District:

### (a) High hills (1500 to 2000 mt):

- *Large Cardamom:* Vegetative (Leg Phase) / Primary Flowering / Secondary Flowering;
- *Maize:* Sowing & Germination / Early Vegetative / Vegetative;
- *Seed Potato:* Tuberization;
- *Summer Potato (Very High Hills):* Vegetative / Tuberization;
- *Kharif Vegetable:* Transplantation / Vegetative;

### (b) Medium hills (1000 to 1500 mt):

- *Large Cardamom:* Vegetative (Leg Phase) / Primary Flowering / Secondary Flowering;
- *Maize:* Vegetative / Late Vegetative / Tasseling & Silking / Flowering & Cob-Filling;
- *Orange:* Flowering / Transplantation of Seedlings from Nursery;
- *Rabi Potato:* Maturity / Harvesting;
- *Kharif Vegetable:* Transplantation / Vegetative;
- *Ginger:* Sowing / Germination;

### (c) Low Hills (Below 1000 mt):

- *Large Cardamom:* Vegetative (Leg Phase) / Primary Flowering / Secondary Flowering;
- *Maize:* Vegetative / Late Vegetative / Tasseling & Silking / Flowering & Cob-Filling;
- *Orange:* Flowering / Transplantation of Seedlings from Nursery;
- *Rabi Potato:* Maturity / Harvesting;
- *Kharif Vegetable:* Transplantation / Vegetative;
- *Ginger:* Sowing / Germination;

# Agro-meteorological Advisories (District-wise):

## (A) Large Cardamom: (North/East/South/West Districts)

### Nursery

- Disease / pests infested suckers may be removed and destroyed.
- Each & every large cardamom farmer should have his own large cardamom high yielding sucker nursery, for which necessary selection of sites, collection of cattle manure, jungle soil, bamboo materials should be made immediately if not done.
- Trenches of 45cm wide and 30cm depth may be opened at convenient length with an interspacing of 30cm well decomposed FYM mixed with the soil and trenched are filled. Disease free, high yielding one group up shoots with emerging buds may be planted at 45cm apart in the trenches with in May and June and the base may be mulched with forest leaves. To support the sucker bamboo/wooden stakes may be provided.
- Overhead pandals may be erected immediately after the planting of suckers.

### Plantation

- Chirke and Foorkey infected cardamom plants may be destroyed by uprooting/ burial/ burning at regular intervals in the pits.
- Regular inspection may be carried out to observe caterpillar/shoot borer/shoot fly incidence, if any, may be hand-picked and destroyed mechanically.
- Application of cattle manure / compost / organic manure will help in getting sustained production, improving productivity and quality of the crop.
- One round weeding followed by mulching may be carried out to conserve soil moisture if it is not done earlier.
- Re-plantation and rejuvenation of plantation may be done with disease free planting materials.



- All the aged/ diseased / unproductive cardamom plants may be uprooted and pits of 30X30X30 cm may be opened at a spacing of 1.5X1.5 meters. Then the pits are to be filled with top soil / compost. And planted with the diseases free planting materials.
- Application of 1% Bordeaux mixture to the cardamom plantation will help to control the fungal diseases.
- Arrangements may be done for getting good shade tree saplings for planting in the open/poor shaded areas.

**(B) Paddy: (North/East/South/West Districts)**

- The seeds to be sown in the nursery located at nearby field to avoid transportation and where water is easily available. The soil should be pulverized by ploughing and the clods to be crashed with the help of beams. The field should be irrigated, puddle with plough, and fresh terraced bunds to be made and weeds and stubbles removed. One-tenth of hectare nursery will suffice for transplanting of one hectare of land. The nursery bed should then be left undisturbed for 8 hours so that the soil particles settled down. About 25 quintals of well rotted FYM or compost should be broadcast manually. About 40 – 50 Kg per hectare of certified, healthy and pre-treated seeds put in to a bucket of salt water and lighter seeds rejected and sowing done within 24 hours and irrigation immediately thereafter and continued for next 4 – 5 days. When the seeds start germination, the water level should then be reduced to 1 cm for 2 days so that the germinated seedling may not die sub-merge under water. After that water should be completely drained out after every 3 – 4 days interval till the seedling are ready for transplantation.

**(C) Maize: (North/East/South/West Districts)**

- Weeding to be done for the second time before initiation of corn and cob and earthing up done there after so that the plants do not fall down during strong wind and top dressed with FYM/Compost.

**(D) Seed(Kharif) Potato: (North/East/South/West Districts)**

- Weeding to be done properly after 20 – 40 days of sowing when the plants are 10 – 15 cm high and 60 – 70 days thereafter, and FYM compost applied after each weeding.

**(E) Rabi Potato (Red Pimpernel): (North/East/South/West Districts)**

- Weeding to be done properly after 20 – 40 days of sowing when the plants are 10 – 15 cm high and 60 – 70 days thereafter, and FYM compost applied after each weeding.

**(F) Kharif Vegetables: (North/East/South/West Districts)**

- The loose soil of seedlings of Tomato (Pusa Ruby), Chilly (Pusa Jwala), Capsicum (Hungarian Vex/Elephant Trunk) and Brinjal (Pusa Purple) transplanted in the mid and upper terraces should be packed tightly and enough shade provided during bright sunshine. Also the climbing plants viz. Pumpkin, gourd, bitter gourd, snake gourd, cucumber etc. in the lowermost terrace must be given proper supporting structure. The aforesaid crops along with ladies finger must be weeded and top dressing done with FYM/Compost on monthly basis.



**(G) Ginger: (North/East/South/West Districts)**

- Top dressing with organic manure and mulching to be done on monthly basis. Proper drainage to be maintained in the drains between 1 foot high crop beds in order to protect the crop from rhizome rot during spells of heavy rain. The crop should be inspected weekly and frequently during heavy rains and diseased plants affected by bacteria etc. rouged and burnt oil outside the field to protect the other plants. Weeding should not be done on rainy days.

**(I) Orange: (North/East/South/West Districts)**

- Seedling is planted in May, June & July. The triangular/rectangular pits already dug in winter should be filled with 15Kg organic manure and compost and mixed with soil in equal ratio and seedling planted up to the level of extracted roots, otherwise the tips would not easily and allowed made for enough air and sunlight. Otherwise the plant would be prone to diseases and irrigation done immediately thereafter. The plant should be irrigated during dry spells. The orchards must be inspected from time to time and plugging of trunk borer holes repeated and sprouts immerging out of the trunks removed. De-shooting/debugging of newly planted and 1-4 years old trees up to a basal height of 40 – 50 cm done on monthly intervals.