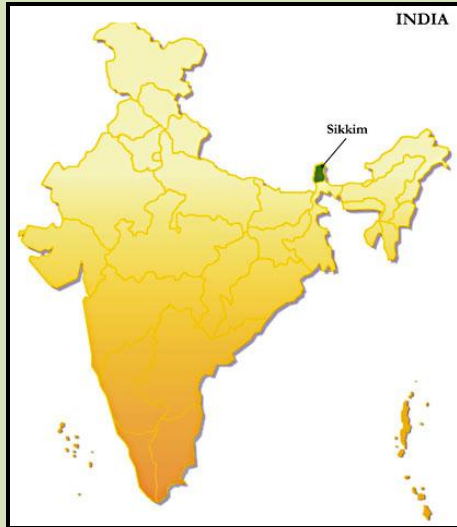




STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 18TH APRIL TO 20TH APRIL'2017



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



ISSUED ON TUESDAY 18TH APRIL'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 → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
14/4/2017	000	23.3	12.3	Rainfall	Very Light	Light	Light	Light	Light
15/4/2017	048	24.3	13.2	Wind (Speed/ Dir)	2Km/Hr (WSW)	2Km/Hr (SE)	3Km/Hr (SE)	2Km/Hr (NE)	3Km/Hr (E)
16/4/2017	001	25.4	14.4	Temperature (Min-Max)	16 - 26°C	16 - 25°C	15 - 24°C	15 - 25°C	16 - 25°C
17/4/2017	000	26.5	15.2	RH (Min-Max)	54 - 87%	58 - 89%	60 - 91%	59 - 90%	57 - 88%

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
14/4/2017	000	22.4	13.4	Rainfall	Very Light	Light	Light	Light	Light
15/4/2017	005	13.7	11.3	Wind (Speed/ Dir)	3Km/Hr (ESE)	2Km/Hr (ESE)	2Km/Hr (ENE)	3Km/Hr (ENE)	3Km/Hr (E)
16/4/2017	003	20.6	10.7	Temperature (Min-Max)	14 - 21°C	13 - 20°C	13 - 19°C	14 - 20°C	14 - 21°C
17/4/2017	000	22.8	12.7	RH (Min-Max)	68 - 89%	72 - 90%	71 - 92%	73 - 90%	71 - 88%

Namthang				South Sikkim Forecast					
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Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day →	Day 1	Day 2	Day 3	Day 4	Day 5
				Parameter ↓	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
14/4/2017	000	20.0	15.0	Rainfall	Very Light	Light	Light	Light	Light
15/4/2017	000	17.5	14.5	Wind (Speed/ Dir)	3Km/Hr (SE)	3Km/Hr (ESE)	2Km/Hr (E)	3Km/Hr (ENE)	2Km/Hr (E)
16/4/2017	011	22.5	10.0	Temperature (Min-Max)	14 - 26°C	14 - 25°C	13 - 24°C	14 - 25°C	14 - 26°C
17/4/2017	000	27.5	14.0	RH (Min-Max)	64 - 88%	66 - 90%	68 - 91%	63 - 90%	63 - 88%


Gyalshing (AWS)				West Sikkim Forecast					
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Day →	Day 1	Day 2	Day 3	Day 4	Day 5
				Parameter ↓	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
				Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy
14/4/2017	N/A	N/A	00.0	Rainfall	Very Light	Light	Light	Light	Very Light
15/4/2017	N/A	N/A	02.3	Wind (Speed/ Dir)	2Km/Hr (SSE)	2Km/Hr (NE)	3Km/Hr (ENE)	3Km/Hr (NE)	2Km/Hr (ENE)
16/4/2017	N/A	N/A	04.3	Temperature (Min-Max)	15 - 22°C	14 - 21°C	14 - 21°C	15 - 22°C	15 - 23°C
17/4/2017	N/A	N/A	00.0	RH (Min-Max)	68 - 87%	72 - 89%	70 - 92%	72 - 91%	71 - 86%

Part II

AGRO-METEOROLOGICAL ADVISORIES



General Advisories for all the crops/ livestock


- ❖ Spraying of plant protection bio-pesticides on bright sunny day for insect and disease management is recommended.
- ❖ Vermicompost pits should be covered with gunny bags / paddy straw/ dry forest litter to regulate the temperature.
- ❖ Avoid feeding of damp and foul smelling feed to all livestock and poultry.
- ❖ De-worming with Fenbendazole @ 10 mg / kg body weight.
- ❖ Protect animals from rain and thunders by providing protective cover/ housing.
- ❖ Vaccination of the cattle, goat, Yak and Sheep should be done against FMD, HS and BQ.

Name of the crop/Animal	Stage	Pest/ Disease	Agro-Met Advisories
Crops			
Maize	Sowing /Germination		<ul style="list-style-type: none">❖ Take protection measure to save maize seedlings from birds. One hand weeding should be done after 20 days of sowing.❖ Regular monitoring for insect-pest and collection and destruction should be done.❖ Application of mixture of cow urine + water + neem oil (2 litre + 8 litre + 50 ml) @ 100 ml/plant for management

			<p>of cut worm.</p> <ul style="list-style-type: none"> ◆ For management of Army worm spray spinosad @ 0.3 ml/litre. ◆ Proper drainage should be ensured.
Okra	Sowing		<ul style="list-style-type: none"> ◆ Sowing of seed treated with 5-10% <i>Trichoderma viride</i> should be done for management of soil borne diseases in well prepared field at a spacing of 30 cm x 30 cm on raised beds/ridges. ◆ Well decomposed FYM @ 2 kg/m² and vermicompost @ 500 g/m² ◆ Proper drainage should be ensured.
Cucurbits	Nursery/ transplanting		<ul style="list-style-type: none"> ◆ Prepare 4 inch raised bed of 1 m x 5 m size for nursery raising. ◆ Bed should be prepared to a fine tilth by mixing well decomposed FYM @ 2 kg/m² and vermicompost @ 500 g/m² incubated with 5-10 % <i>Trichoderma viride</i> for management of soil borne diseases. ◆ Seed should be sown in line 4-5 cm apart at shallow depth 1-2 cm. ◆ Light irrigation should be provided immediately after

			<p>seed sowing with rose can.</p> <ul style="list-style-type: none"> ◆ Proper moisture should be maintained in nursery beds for better germination. ◆ About 15-20 cm (25-30 days) seedlings should be transplanted in small pits at spacing of 100 cm x 100 cm.
Tomato/ Red cherry pepper	Nursery raising/ Transplanting		<ul style="list-style-type: none"> ◆ Prepare 4 inch raised bed of 1 m x 5 m size for nursery raising. ◆ Bed should be prepared to a fine tilth by mixing well decomposed FYM @ 2 kg/m² and vermicompost @ 500 g/m² incubated with 5-10 % <i>Trichoderma viride</i> for management of soil borne diseases. ◆ Seed should be sown in line 4-5 cm apart at shallow depth 1-2 cm. ◆ Light irrigation should be provided immediately after seed sowing with rose can. ◆ Proper moisture should be maintained in nursery beds for better germination. ◆ About 15-20 cm (25-30 days) seedlings should be transplanted in small pits at spacing of 45 cm x 60 cm for tomato and 100 cm x100 cm for Red cherry pepper.

Large cardamom	Flowering		<ul style="list-style-type: none"> ◆ Regular watering should be done at 15 – 30 days intervals in case there is a gap in rainfall. ◆ Regular weeding should be done. ◆ Regular monitoring for pest and disease incidence. ◆ Shade management with the proper lopping of trees.
Ginger/ Turmeric	Planting		<ul style="list-style-type: none"> ◆ Identify healthy plants for seed rhizomes. ◆ Selected rhizomes of 40-50 g bit having minimum two buds should be planted. ◆ Rhizome should be treated with hot water at 52 ° C for 10 min followed by <i>Trichoderma viride</i> @ 10 % (100 g /kg). ◆ Forest litter @ 1 kg/ sqm should be applied as mulch material. ◆ Apply well decomposed FYM @ 20-25 t/ha + 1.0 t/ha neem cake and mix properly with soil 7-10 days before sowing. ◆ Broadcast dolomite @ 2 t/ha before sowing and mix properly with soil.

Sikkim Mandarin	Flowering/ Fruit set		<ul style="list-style-type: none"> ◆ Basin maintenance and manuring with FYM @ 30-35 kg/tree should be done. Avoid ploughing and application of FYM close to the trunk. ◆ Tree trunk should be painted with Bordeaux mixture @ 1%. ◆ Intercropping of ginger and turmeric should be avoided.
Kiwi fruit	Bud break		<ul style="list-style-type: none"> ◆ Basin maintenance and manuring with FYM @ 30-35 kg/tree should be done. Avoid application of FYM close to the trunk. ◆ Mounting of hail net/ Agro shade net 50% on the trees to avoid plant damage from hails /heavy rainfall.
<i>Animal Sciences</i>			
Tibetan Sheep			<ul style="list-style-type: none"> ◆ Feeding of 200 g concentrate feed along with mineral mixture and salt. ◆ Shearing of sheep should be ensured before onset of heavy rainfall.
Yak			<ul style="list-style-type: none"> ◆ Concentrate feed along with mineral mixture @ 50 g/ adult; @ 10 g /calf and salt @ 1kg/100 kg feed should be given.
Cattle, Sheep			<ul style="list-style-type: none"> ◆ Farmers are advised to look

and Goat			<p>for heat sign especially during early morning or late evening and ensure breeding of the dairy cattle after 12 hr of observation of heat.</p> <ul style="list-style-type: none"> ◆ Breeding of the sheep/goat should be done after 24-30 hr of observation of heat. ◆ Feeding of concentrate feed along with jaggery, mineral mixture and salt. ◆ Periodic application of fly repellents and/or netting of dung pit are recommended.
Cattle			<ul style="list-style-type: none"> ◆ Balanced feeding of dairy animals @ 3 kg / cattle as maintenance and @ 1 kg /2.5 liter milk production as production ration over and above the maintenance ration. ◆ Allow calf suckling immediately after parturition. ◆ Full hand milking should be practiced. ◆ Frequent incomplete milking at interval of 4hrs should be practiced after parturition for minimum 1 week. Afterwards complete milking in a day is recommended.
Poultry		Coccidiosis , Ranikhet disease	<ul style="list-style-type: none"> ◆ 16 hrs of light (natural and electrical) should be provided to adult birds for optimum egg production.

			<ul style="list-style-type: none"> ◆ Frequent raking and liming of deep litter materials. ◆ Inclusion of turmeric powder @ 10g/kg feed for prevention of coccidiosis. ◆ Maintenance of brooder temperature for chicks with the help of electrical bulbs for initial one month. ◆ Vaccinate the chicks against ND / RD at 5- 7 day and at 30th day of age. ◆ Calcium/shell grit and multi vitamin supplementation is strongly recommended to optimize egg production. ◆ Spraying of ectoparasiticides viz., deltamethrin/cypermethrin @ 1% v/v in water.
Pig	All stages	Swine fever	<ul style="list-style-type: none"> ◆ Keep floor dry to avoid skin diseases. ◆ Weaning is recommended at the age of 8 weeks for crossbreds and 10 weeks for indigenous pigs. ◆ Swine fever vaccine at the age of 8-10 week is recommended. ◆ Critical heat detection in early morning and late evening is recommended. ◆ Feed 5-10% green fodder of their diet.

Agro-Met Advisory member of ICAR-NOFRI, Tadong, Sikkim

Name	Designation	Department
1. Dr. R. K. Avasthe	Joint Director	Soil Science
2. Dr. Ashish Yadav	Senior Scientist	Horticulture
3. Dr. Raghavendra Singh	Senior Scientist	Agronomy
4. Dr. Rafiqul Islam	Senior Scientist	Animal Reproduction
5. Dr. Matber Singh	Scientist, SS	Agro forestry
6. Dr. Brijesh Kumar	Scientist	Animal Reproduction
7. Dr. Shweta Singh	Scientist	Plant Pathology
8. Dr. Chandramani Raj	Scientist	Plant Pathology
9. Mr. Boniface Lepcha	SMS	Horticulture

Miss Yamuna Pandey
(Technical Officer, GKMS)
(Agromet, ICAR-NOFRI Tadong, Sikkim)