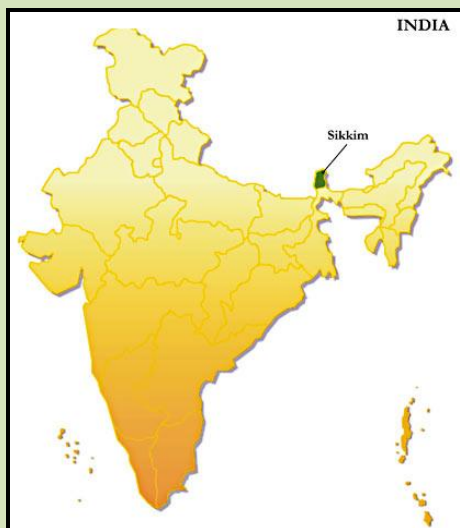




STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM PERIOD: 2ND DECEMBER TO 5TH DECEMBER'2016



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



ISSUED ON TUESDAY 29TH NOVEMBER'2016

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					
				Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Sky Condition	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy
				Rainfall	Very Light	No rain	No rain	No rain	No rain
29-11-2016	000	25.3	09.5	Wind (Km/Hr) (Speed/ Dir)	2(NE)	2(SSW)	3(SW)	2(SSW)	2(ESE)
30-11-2016	000	24.0	09.4	Temperature (Min-Max)	10 - 23°C	9 - 24°C	9 - 24°C	9 - 24°C	9 - 24°C
1-12-2016	000	20.1	08.7	RH (Min- Max)	57 - 82%	58 - 81%	58 - 82%	54 - 81%	55 - 80%

Gangtok				East Sikkim Forecast					
				Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Partly Cloudy	Partly Cloudy
				Rainfall	Very Light	No rain	No rain	No rain	No rain
29-11-2016	000	18.0	10.3	Wind (Km/Hr) (Speed/ Dir)	2(ESE)	3(SW)	2(SE)	2(SSE)	3(ENE)
30-11-2016	000	15.0	11.5	Temperature (Min-Max)	11 - 14°C	11 - 15°C	10 - 15°C	10 - 16°C	10 - 16°C
1-12-2016	000	13.8	10.7	RH (Min- Max)	66 - 87%	65 - 88%	64 - 86%	63 - 85%	63 - 85%

Namthang				South Sikkim Forecast					
				Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Partly Cloudy
				Rainfall	No rain	No rain	No rain	No rain	No rain
29-11-2016	000	19.0	08.0	Wind (Km/Hr) (Speed/ Dir)	3(E)	3(SW)	3(SSE)	2(S)	2(E)
30-11-2016	000	18.0	09.5	Temperature (Min-Max)	9 - 18°C	9 - 18°C	9 - 19°C	9 - 19°C	9 - 19°C
1-12-2016	000	14.0	08.5	RH (Min- Max)	62 - 85%	63 - 87%	62 - 85%	61 - 84%	61 - 84%

Gyalshing (AWS)				West Sikkim Forecast					
				Day → Parameter ↓	Day 1	Day 2	Day 3	Day 4	Day 5
Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp (°C)	Sky Condition	Generally Cloudy	Generally Cloudy	Generally Cloudy	Generally Cloudy	Partly Cloudy
				Rainfall	No rain	No rain	No rain	No rain	No rain
29-11-2016	000	00.0	00.0	Wind (Km/Hr) (Speed/ Dir)	2(ESE)	3(SW)	3(ESE)	2(W)	2(NNE)
30-11-2016	000	00.0	00.0	Temperature (Min-Max)	11 - 18°C	10 - 18°C	9 - 19°C	9 - 19°C	9 - 19°C
1-12-2016	000	00.0	00.0	RH (Min- Max)	62 - 82%	62 - 83%	61 - 84%	60 - 84%	60 - 83%

Part II

AGRO-METEREOLOGICAL 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 .
- ❖ Mulching should be done through locally available biomass to conserve soil moisture for rabi crops.
- ❖ Jalkund should be covered with thatch to prevent evaporation losses.
- ❖ 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
Crops			
Rice	Harvesting		<ul style="list-style-type: none">❖ Birds scaring ribbon should be used for scaring the birds.❖ Harvesting should be done on sunny day atleast 15 cm above the ground for moisture conservation and no till pea and mustard/ toria sowing.❖ After sun drying harvested paddy is

			recommended to be stored at $\leq 14\%$ moisture.
Black gram	Maturity/ Harvesting		<ul style="list-style-type: none"> ◆ Periodic harvesting should be done when pod turns pale yellow colour. ◆ Harvested pods should be sun dried and stored at $< 8\%$ moisture level.
Buckwheat	Sowing		<ul style="list-style-type: none"> ◆ After field preparation FYM @ 2t/ha and vermicompost @ 1t/ ha should be applied. ◆ Sowing should be done in line at the spacing of 30x10cm.
Mustard/ Toria	Sowing		<ul style="list-style-type: none"> ◆ After field preparation FYM @ 2t/ha and vermicompost @ 1t/ ha should be applied. ◆ Sowing should be done in line at the spacing of 30x10cm. ◆ Alternatively, sowing can also be done immediately after harvesting of rice under no till condition in between the rows (zero till).
Vegetable pea/ Field pea	Sowing		<ul style="list-style-type: none"> ◆ Apply FYM @ 2 t/ha and vermicompost @ 1 t/ ha before sowing. ◆ Sowing should be done in line at the spacing of 30-40cm x 10cm. ◆ Soil moisture should be maintained for proper germination. ◆ Alternatively, sowing can also be done immediately after harvesting of rice under no till condition in between the rows (zero till).
Tomato	Flowering/ fruiting	Late blight	<ul style="list-style-type: none"> ◆ Removal of infected leaves/ plant and drenching/ spray with copper oxychloride @ 0.25 % or Bordeaux mixture @ 1%. ◆ Harvesting of mature green tomato should be done for distant market and pinkish/ reddish for local market.
Red cherry pepper/Dalley chilli	Harvesting	Fruit fly	<ul style="list-style-type: none"> ◆ Collection and destruction of infested dropped fruits. ◆ Regular harvesting should be done to improve the yield.
Winter vegetables	Nursery/ Transplanting	Fruit fly	<ul style="list-style-type: none"> ◆ Transplanting should be done in small pits filled with well decomposed FYM @ 2-2.5 kg/sqm., neem cake @ 200g/sqm. and Trichoderma @ 1-2 g/sqm should be mixed in soil before transplanting.

			<ul style="list-style-type: none"> ◆ Nursery can be raised for early winter vegetables like cabbage, cauliflower, broccoli, raya saag etc. Seed should be sown in moist soil in raised nursery bed of size 1x5m under protected condition. ◆ FYM @ 2kg/ sqm, neem cake @ 200g/sqm, Trichoderma @2% should be incorporated in soil before sowing seed. 6 Regular watering in nursery is recommended.
Large cardamom	Post harvest crop management	-	<ul style="list-style-type: none"> ◆ Removal and burying of blight infected leaves. ◆ Weeding/ removal of infected tillers should be done. ◆ Regular watering should be done at 10-15 days intervals. Regular monitoring for pest and disease incidence. ◆ Shade management with the proper lopping.
Ginger	Seed rhizome		<ul style="list-style-type: none"> ◆ Identify healthy plants for seed rhizomes.
Sikkim mandarin	Fruit maturity / Harvesting	Fruit drop	<ul style="list-style-type: none"> ◆ Collection of infected dropped fruit and buried in to soil. ◆ Regular monitoring for trunk borer infestation. ◆ Harvesting should be done along with twig with two leaves. Diseased and senile branches should be removed.
Animal Sciences			
Tibetan Sheep			<ul style="list-style-type: none"> ◆ Feeding of concentrate feed along with mineral mixture and salt. ◆ Hay feeding is recommended.
Yak			<ul style="list-style-type: none"> ◆ Feeding of concentrate feed along with mineral mixture and salt. ◆ Hay feeding is recommended. ◆ Trimming of hair is recommended.
Cattle, Sheep and Goat			<ul style="list-style-type: none"> ◆ 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. ◆ Breeding of the sheep/goat should be done 24-30 hr after observation of heat. ◆ Feeding of concentrate feed along with jaggery, mineral mixture and

			<p>salt.</p> <ul style="list-style-type: none"> ◆ 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 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. ◆ 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. ◆ 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. ◆ Ranikhet vaccination at 5th 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.
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Agro-Met Advisory member of ICAR-NOFRI, Tadong, Sikkim

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5. Dr. Matber Singh	Scientist, SS	Agroforestry
6. Dr. R. Gopi	Scientist, SS	Plant Pathology
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