STATE COMPOSITE AGRO-MET ADVISORY BULLETIN FOR THE STATE OF SIKKIM

PERIOD: 27TH SEPTEMBER TO 29TH SEPTEMBER'2016

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

ISSUED ON TUESDAY 27TH SEPTEMBER'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 Gyalsing
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	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy
23-9-2016	070	23.5	17.2	Rainfall	Light	Light	Light	Light	Light
24-9-2016	037	25.3	17.4	Wind (Speed/ Dir)	3Km/Hr (SW)	3Km/Hr (SW)	3Km/Hr (E)	3Km/Hr (NE)	4Km/Hr (ENE)
25-9-2016	130	20.0	17.5	Temperature (Min-Max)	16 - 23°C	16 - 23°C	17 - 23°C	17 - 22°C	16 - 23°C
26-9-2016	009	22.1	15.4	RH (Min-Max)	66 - 85%	68 - 88%	66 - 88%	70 - 90%	73 - 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
23-9-2016	025	19.3	16.7	Rainfall	Light	Light	Light	Light	Light
24-9-2016	000	20.8	16.0	Wind (Speed/ Dir)	2Km/Hr (WNW)	2Km/Hr (WSW)	2Km/Hr (SE)	2Km/Hr (ENE)	3Km/Hr (E)
25-9-2016	049	16.6	15.8	Temperature (Min-Max)	16 - 20°C	16 - 21°C	16 - 21°C	15 - 20°C	15 - 20°C
26-9-2016	013	19.4	14.5	RH (Min-Max)	70 - 82%	68 - 84%	66 - 85%	71 - 88%	69 - 92%

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	Cloudy	Cloudy
23-9-2016	002	26.0	19.0	Rainfall	Light	Light	Light	Light	Light
24-9-2016	000	27.0	18.5	Wind (Speed/ Dir)	3Km/Hr (W)	2Km/Hr (WSW)	2Km/Hr (ESE)	3Km/Hr (ENE)	3Km/Hr (E)
25-9-2016	022	20.0	18.5	Temperature (Min-Max)	17 - 26°C	17 - 26°C	18 - 25°C	18 - 25°C	17 - 24°C
26-9-2016	003	N/A	15.5	RH (Min-Max)	72 - 82%	72 - 84%	67 - 85%	70 - 87%	73 - 89%

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
23-9-2016	N/A	N/A	N/A	Rainfall	Light	Light	Light	Light	Light
24-9-2016	N/A	N/A	N/A	Wind (Speed/ Dir)	3Km/Hr (W)	2Km/Hr (W)	3Km/Hr (NE)	3Km/Hr (NNE)	3Km/Hr (ENE)
25-9-2016	N/A	N/A	N/A	Temperature (Min-Max)	16 - 21°C	16 - 22°C	17 - 23°C	17 - 22°C	17 - 22°C
26-9-2016	N/A	N/A	N/A	RH (Min-Max)	80 - 85%	75 - 87%	71 - 89%	73 - 87%	75 - 90%

Part II

AGRO-METEREOLOGICAL ADVISORIES

- **Spraying of plant protection biopesticides on bright sunny day for insect and disease management is recommended.**
- **Water harvesting structure should be constructed for storing rain water.**
- **Provide adequate drainage to avoid water logging in ginger, turmeric and summer vegetables.**
- **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	Vegetative/tillering state	Leaf folder	◈ Weeding should be done where crop is in vegetative stage (20-25 days after planting). ◈ Proper maintenance of field channel and bunds are necessary to utilize the rain water. ◈ Uprooted weeds may be left in between rows to decompose in standing flood water. Weeds may be incorporated into the soil under SRI. ◈ Spray neem based formulation (1500ppm) @ 3ml per litre of water for controlling leaf folder. ◈ Maintain proper drainage for good

			tillering
Black gram	Vegetative stage		◈ To avoid water logging proper drainage should be maintained. ◈ Weeding should be done.
Finger millet	Transplanting/ vegetative		◈ Proper maintenance of field channel and bunds are necessary to utilize the rain water. ◈ First weeding should be done upto 30 days after transplanting. ◈ Maintain optimum plant population (20x15cm) for higher yield.
Rice bean	Vegetative stage	Blister Beetle Legume pod borer	◈ Proper staking should be done. ◈ Collection and destruction of Blister beetles and spraying of Neem oil @3ml/lit should be done.
Soybean	Land preparation/ sowing		◈ Weeding should be done ◈ Maintain optimum plant population. ◈ Uproot diseased plants.
Tomato	Flowering/ fruiting/ harvesting	Fruit borer/ white fly/ late blight	◈ Infected/dried leaves should be pruned and spray COC @ 0.25% at 7-10 days interval for management of late blight. ◈ Application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre for management of aphids, white fly *etc.* at 15 days interval for 2-3 times. ◈ Installation of sex pheromone traps @ 2-3 traps/1000 sqm.
Red cherry pepper/Dalley chilli	Vegetative/ flowering/ fruiting	Aphid/ white fly	◈ Drenching with COC @ 0.25% at 7-10 days interval for management of root rot. ◈ Application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre for management of aphids, white fly etc. at 15 days interval for 2-3 times.
Gourds (Bottle/ bitter/ sponge/ ridge)	Flowering/ fruiting	Fruit fly	◈ Proper drainage should be maintained. ◈ Collection and destruction of infested fruit. ◈ Installation of para pheromone trap (cue lure) @ 16-20 traps/ha. ◈ Regular harvesting should be done to improve the yield.

Okra Cucurbitaceous crops	Flowering/ fruiting/ harvesting	Blister beetle/ friut fly	◈ Proper drainage should be ensured. ◈ Regular monitoring, collection and destruction of beetles. ◈ Install pheromone traps @ 16-20 traps/ha for control of fruit fly. The lure has to be replaced at every 20 days interval. ◈ Collect and destroy the infected fruits.
Large cardamom	Vegetative/ floral bud formation	-	◈ Planting of disease free sucker should be done. ◈ Apply well decomposed FYM @ 2kg/ vermicompost @ 200g and neem cake @ 150g per clump. ◈ Removal and burying of blight infected leaves. ◈ Weeding/ removal of infected tillers should be done. ◈ Removal of infected leaves/ plant and spray with copper oxychloride @ 0.25 %.
Ginger	Vegetative	Soft rot	◈ Proper drainage should be maintained. ◈ Weeding and second mulching is recommended. ◈ Removal of infected leaves/ plant and drenching/ spray with copper oxychloride @ 0.25 %.
Sikkim mandarin	Fruit growth	Trunk borer/ leaf miner Scab and Felt disease	◈ Tree trunk should be painted with 1% Bordeaux paste. ◈ Plant basin should be kept weed free. ◈ Proper drainage should be ensured. ◈ For leaf miner and aphids management, application of petroleum agrospray @ 10ml/litre or neem oil (1500 ppm) @ 5 ml/litre at 15 days interval for 2-3 times is recommended. ◈ Spray COC @ 0.25% after removing the infected branches ◈ Regular monitoring for detection of trunk borer infestation at the base of the trunk is advised. If wooden frass is observed, cleaning and insertion of cotton soaked in kerosene and plastered with clay and cowdung mixture.

Kiwifruit	Fruiting		◈ Plant basin should be kept weed free. ◈ Proper drainage should be maintained to avoid water stagnation. ◈ Basin should be weed free. Avoid FYM application near the tree trunk. ◈ To fertilize the crop, well decomposed FYM @ 10-20kg /plant should be applied in the basin of trees. ◈ Preventive spray of copper oxychloride @ 0.25 % and petroleum oil based agro spray @ 10 ml/l.
Animal Sciences			
Tibetan Sheep			◈ 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. ◈ Hay feeding is recommended. ◈ Trimming of hair is recommended.
Cattle, 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 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 salt. ◈ Periodic application of fly repellents and/or netting of dung pit are recommended.
Cattle			◈ 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	◈ 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	◈ 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.