



**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Ukhrul (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 16.0 – 19.0 °C & minimum temp. -1.0 – 3.0 °C. Relative humidity may reach upto 96 % (max RH) & 38 % (min RH). The average wind speed may be 3-5 km/ hr during next five days. The Wind direction may be south westerly to north westerly during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea { 5 pumps/ sangam @ 10g/ pump } or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**“Gramin Krishi Mausam Seva”**

(I. Meghachandra Singh)  
Scientist i/c, IAAS



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Bishnupur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Bishnupur (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 19.0 – 21.0 °C & minimum temp. 0.0 – 3.0 °C. Relative humidity may reach upto 97 % (max RH) & 33 % (min RH). The average wind speed may be 4-6 km/ hr during next five days. The Wind direction may be north-easterly but westerly on 24<sup>th</sup> Dec. during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Chandel (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 17.0 – 20.0 °C & minimum temp. 0.0 – 3.0 °C. Relative humidity may reach upto 96 % (max RH) & 40 % (min RH). The average wind speed may be 3-6 km/ hr during next five days. The Wind direction may be south westerly to north westerly during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
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		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

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**Weather forecast for next five days of Churachandpur (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 17.0 – 20.0 °C & minimum temp. 0.0 – 3.0 °C. Relative humidity may reach upto 99 % (max RH) & 31 % (min RH). The average wind speed may be 4-6 km/ hr during next five days. The Wind direction may be south westerly to north westerly during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**“Gramin Krishi Mausam Seva”**

(I. Meghachandra Singh)  
Scientist i/c, IAAS



**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Imphal-East**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Imphal-East (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 18.0 – 20.0 °C & minimum temp. 0.0 – 2.0 °C. Relative humidity may reach upto 99 % (max RH) & 31 % (min RH). The average wind speed may be 3-5 km/ hr during next five days. The Wind direction may be north-easterly but westerly on 24<sup>th</sup> Dec. during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea { 5 pumps/ sangam @ 10g/ pump } or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**“Gramin Krishi Mausam Seva”**

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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Imphal-West**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Imphal-West (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 19.0 – 21.0 °C & minimum temp. 0.0 – 3.0 °C. Relative humidity may reach upto 97 % (max RH) & 31 % (min RH). The average wind speed may be 4-5 km/ hr during next five days. The Wind direction may be north-easterly but westerly on 24<sup>th</sup> Dec. during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea { 5 pumps/ sangam @ 10g/ pump } or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Senapati (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 16.0 – 19.0 °C & minimum temp. -1.0 – 2.0 °C. Relative humidity may reach upto 95 % (max RH) & 33 % (min RH). The average wind speed may be 3-4 km/ hr during next five days. The Wind direction may be south westerly to north westerly during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

(I. Meghachandra Singh)  
Scientist i/c, IAAS



**ICAR Research Complex for N.E.H. Region  
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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Tamenglong (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 19.0 – 22.0 °C & minimum temp. 0.0 – 4.0 °C. Relative humidity may reach upto 98 % (max RH) & 31 % (min RH). The average wind speed may be 4-5 km/ hr during next five days. The Wind direction may be south westerly to north westerly during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
* mulching may be done to conserve residual soil moisture as well as to maintain the soil temperature.			
<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
<b>Cauliflower &amp;</b>	Head formation	<i>Whip tail</i>	- If <i>Whip tail</i> is observed in cauliflower, spray Borax @ 3g/ lit of water or



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**“Gramin Krishi Mausam Seva”**

<b>Cabbage</b>	stage		spray Tracel (micronutrient @ 5 g/ lit of water) in addition to recommended dose of fertilizer.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cole crops</b>	Nursery raising		Nursery for late crops may be raised.
<b>Onion</b>	Transplanting		- Transplant 45-60 days old seedlings at a spacing of 10cm x 20cm also avoid deep transplanting. 500-600 seedlings will be required to transplant in one sangam area. - Give light watering during morning and evening hours till plants are established. - Apply 64kg Urea, 44kg DAP and 34 KG MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Tomato</b>	Nursery raising to transplanting		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Moisture control inside the poultry shed may be done by proper ventilation and management of litter material by mixing 2kg per 100 sq. ft. area. - Hang heisian cloths around the shed to avoid cold during night time. - Add extra mineral or electrolyte in drinking water.
		Coccidiosis	- Amprolium powder may be added @2 g per lit of drinking water of poultry above 3 weeks of age.
<b>Sheep/ Goat</b>	Above 3 months of age	Ectoparasites	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly. - Check for mites/ manges.
<b>Pig</b>	All age groups	Management for newly born piglets	- As there is likely to have sudden drop in minimum temperature, provide warm/ artificial heat with litter or bedding materials.
		Deworming	Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.
		Ectoparasites (skin infestation)	Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly and apply Himax ointment if wounds are found.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Black Quarter/ Black leg disease/ FMD/HS &Enterotoxaemia	If not vaccinated earlier, vaccinate against B.Q, FMD & H.S. vaccine for all the animals of above 3 months
		Ectoparasitic infestation	Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week and apply Himax ointment if wounds are found.
		Acidosis & Diarrhoea	Provide green fodder in limited quantity.
		Deworming	Give Rafoxanide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole) in lower altitude.
		Fodder cultivation	Cultivate Bersum/ oats (var. P/Giant/ J-4, etc.) for fodder.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Remove aquatic weeds. Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3 % body weight per day.
		Fish	- Sampling of fish for growth, diseased fish should be done regularly by netting. - Partial harvesting may be done to reduce fish population as the water level is low.



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**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 2015**

**Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 23<sup>rd</sup> to 27<sup>th</sup> December, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (18<sup>th</sup> to 21<sup>st</sup> December, 2015)**

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 20<sup>th</sup> Dec. **No** rainfall was recorded during last four days. Maximum temperature range observed was 20.7 – 21.8 °C, range of minimum temperature observed was 2.6 – 4.0 °C, mean relative humidity observed in morning and afternoon were 87.75 % and 44.75 % respectively. The average wind speed range was 2.8 – 4.4 km/hr.

**Weather forecast for next five days of Thoubal (23<sup>rd</sup> to 27<sup>th</sup> December, 2015)**

There may be no rain upto Sunday. Moderate to dense fog may occur at isolated pockets. Sky will remain mainly clear to partly cloudy with maximum temp. of 18.0 – 20.0 °C & minimum temp. 0.0 – 2.0 °C. Relative humidity may reach upto 97 % (max RH) & 35 % (min RH). The average wind speed may be 2-6 km/ hr during next five days. The Wind direction may be north-easterly but westerly on 24<sup>th</sup> Dec. during next five days.

**Weather Warning during next five days**

Moderate to dense fog at isolated pockets of Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rabi Maize</b>	Sowing to early vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Light irrigation may be given to keep soil moist as there is likely to have no rain during next five days.
<b>Rapeseed/ Mustard</b>	Vegetative		- If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. - Apply foliar application of urea {5 pumps/ sangam @ 10g/ pump} or top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Field Pea/ Lentil</b>	Vegetative		- Light watering during morning hours may be done if irrigation facility is available.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of Azadirachtin/ neem oil or pyrethrin may be used.
<b>Storage (seed)</b>			- Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.
<b>Horticulture Crops</b>			
* Light watering during morning hours is advised.			
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<b>Vegetables/ fruits</b>	Soil application		For applying organic formulation in the soil, prepare Sanjivak by mixing 100kg cowdung +100 lit of cow urine + 500g of jiggery + 250 lit of water in a 500 lit capacity closed drum. Ferment for 10 days. Dilute it with 20 times water and sprinkle in one acre of land, either as soil application or along with irrigation water. - For kitchen garden, take 2kg cowdung and 200g oil cake in 20litres capacity plastic bucket and keep it to ferment for 10 days. Dilute it with 20 times water and apply in soil for vegetables and flowers. - To avoid unpleasant smell, it may be kept in open for 1-2 days.
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