



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Bishnupur**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 29.0 – 30.0 °C & minimum temp. 11.0 – 12.0 °C. Relative humidity may reach upto 83% (max RH) & 14 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be South Easterly to South west Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
<b>Field Pea/ Lentil</b>	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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>Horticulture Crops</b>			
<b>Tomato</b>	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
<b>Turmeric</b>	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
<b>French bean</b>	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
<b>Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)</b>	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
<b>Potato</b>	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm.



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**“Gramin Krishi Mausam Seva”**

			- Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxaemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.



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**MANIPUR BULLETIN**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Chandel**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 30.0 – 31.0 °C & minimum temp. 12.0 – 14.0 °C. Relative humidity may reach upto 72% (max RH) & 16 % (min RH). The average wind speed may be 5-6 km/hr. Wind direction may be Westerly to North Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-kharif Rice	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
Field Pea/ Lentil	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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.
Horticulture Crops			
Tomato	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
Turmeric	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
French bean	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
Potato	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.



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**“Gramin Krishi Mausam Seva”**

<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.



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**15<sup>th</sup> March, 2016**

**Churachandpur**

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**Weather forecast for next five days of Churachandpur (16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 28.0 – 29.0 °C & minimum temp. 13.0 – 14.0 °C. Relative humidity may reach upto 79% (max RH) & 15 % (min RH). The average wind speed may be 5-6 km/hr. Wind direction may be Northerly to Southerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-kharif Rice	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
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Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
Potato	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for





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<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
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		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
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<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
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	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
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<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.

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



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**Imphal West**

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**Weather forecast for next five days of Imphal West (16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 29.0 – 30.0 °C & minimum temp. 12.0 – 13.0 °C. Relative humidity may reach upto 94% (max RH) & 13 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North east Easterly to Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
<b>Field Pea/ Lentil</b>	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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>Horticulture Crops</b>			
<b>Tomato</b>	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
<b>Turmeric</b>	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
<b>French bean</b>	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
<b>Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)</b>	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
<b>Potato</b>	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.



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



**“Gramin Krishi Mausam Seva”**

<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.

(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**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Imphal East**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 29.0 – 30.0 °C & minimum temp. 10.0 – 11.0 °C. Relative humidity may reach upto 95% (max RH) & 13 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North East Easterly to North north westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-kharif Rice	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
Field Pea/ Lentil	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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.
Horticulture Crops			
Tomato	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
Turmeric	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
French bean	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
Potato	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm.



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**“Gramin Krishi Mausam Seva”**

			- Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxaemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Senapati**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 28.0 – 29.0 °C & minimum temp. 10.0 – 11.0 °C. Relative humidity may reach upto 93% (max RH) & 14 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be Easterly to North westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-kharif Rice	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
Field Pea/ Lentil	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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.
Horticulture Crops			
Tomato	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
Turmeric	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
French bean	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
Potato	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for



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**“Gramin Krishi Mausam Seva”**

			curing of skin and left undisturbed for 15-20 days.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/ Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.

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



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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Tamenglong (16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 29.0 – 30.0 °C & minimum temp. 11.0 – 12.0 °C. Relative humidity may reach upto 90% (max RH) & 14 % (min RH). The average wind speed may be 3-5 km/hr. Wind direction may be North East Easterly to South south westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-kharif Rice	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
Field Pea/ Lentil	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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.
Horticulture Crops			
Tomato	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
Turmeric	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
French bean	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
Potato	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm.





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



**“Gramin Krishi Mausam Seva”**

			- Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.

(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**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Thoubal**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 28.0 – 29.0 °C & minimum temp. 13.0 – 14.0 °C. Relative humidity may reach upto 81% (max RH) & 13 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be South south Easterly to North Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
<b>Field Pea/ Lentil</b>	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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>Horticulture Crops</b>			
<b>Tomato</b>	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
<b>Turmeric</b>	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
<b>French bean</b>	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
<b>Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)</b>	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25% WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
<b>Potato</b>	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm.



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



**“Gramin Krishi Mausam Seva”**

			- Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
		Deworming	-Give Morantel citrate tablet @ 15 mg/kg of body weight.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Hog Cholera	-Vaccination against swine fever must be carried out.
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
		Johnes disease & Sterility	Immediate proper treatment for the disease should be provided.
		Fodder crops	-Maize should be sown for use as green fodder. -Napier/Guinea grass may be transplanted. -Silage can be prepared.
		Puerperal Fever in Pregnant animals	-50-60 gram of mineral mixture every day.
		Decrease in milk production	-The milk & urine samples must be sent for testing.
	Breedable age group	Controlled breeding	-control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.
	Milch cow	Mastitis	-To prevent mastitis they should be milked completely.
<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
		Feed	Provide feed 1-2 times @ 2 % body weight per day.
		Fish	- Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp. - Harvesting of fish may be done in area where water availability is low.



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**15<sup>th</sup> March, 2016**

**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 16<sup>th</sup> to 20<sup>th</sup> March, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> March, 2016)**

The sky was mainly clear to partly cloudy. The Rainfall 1.3 mm was recorded during past four days. Maximum temperature range observed was 27.1 – 27.7 °C, range of minimum temperature observed was 12.6 – 14.8 °C, mean relative humidity observed in morning and afternoon were 80 % and 49 % respectively. The average wind speed range was 7.3 – 10.2 km/hr.

**Weather forecast for next five days of Ukhrul**

**(16<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Light rain likely during the next five days. Sky will remain mainly fair to partly variable sky, with maximum temp. of 29.0 – 30.0 °C & minimum temp. 12.0 – 13.0 °C. Relative humidity may reach upto 77% (max RH) & 17 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be South West Westerly to North north Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 20th March to 22nd March 2016**

Rain/thundershowers likely at a few places over northeastern states.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Nursery to transplanting		- Prepare nursery bed of 700 m <sup>2</sup> area, apply well decomposed FYM/ compost @ 1 t/ 700 m <sup>2</sup> at final leveling. Seed rate is 40-60 kg for a hectare. Recommended varieties are RC Maniphou 4, 5 and 12. - Apply 65 kg Urea, 250 kg SSP and 45kg MOP per ha as basal dose at the time of final leveling before transplanting. Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope.
<b>Field Pea/ Lentil</b>	Flowering	Powdery Mildew	- Spray Bayleton ( Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump.
		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>Horticulture Crops</b>			
<b>Tomato</b>	Top dressing and earthing up		-40-45 days old tomato should be top dressed with 25 kg urea followed by earthing up. -Spray Sixer (Mencozeb 63 & Carbendazim 13) @ 2 gm/litre of water or Rakhwala (Biopesticide) @ 1.5-2 gm/ litre of water -After 2-3 days spray a dose of Dichlorovos 76 @ 0.5 ml/litre of water or Black dog against borer @ 0.75ml/litre of water.
<b>Turmeric</b>	harvesting		-8-9 months old turmeric may be harvested and spread in airy place for about a week for seed. -Necessary treatment against scab insect and other soil borne diseases should be given. -For table purposes processing for powder should be started within one week from the day of harvest.
<b>French bean</b>	Land preparation		-Land preparation for sowing of French bean should be started. -Quality seed should be collected. -Seed treatment against soil born diseases is advised preferably Trichoderma harzianum @ 10gm/kg seed is recommended. -Seed rate for dwarf variety are 50-60 kg/ha at 10X30 cm spacing and 30-40 kg at 30X45 cm spacing for pole type.
<b>Cucurbits (bottle gourd, sponge gourd, pumpkin, water melon, etc.)</b>	Offseason		-Prepare field into fine tilt and exposed to the sun for 7-10 days to avoid multiplication of mycelium for powdery mildew. - Spray Bayleton (Triademofon 25%WP) @ 7.5 g/ pump (15litre capacity) or Ntivo (Tebuconazole 50% + Trifloxystrobin 25% W. G) at the same dose. - Transplant seedlings of 4-stage leaves at warm temperature.
<b>Potato</b>	For seed		- Try to minimize aphid population, if it is more than 2/100 compound leaves. Spray Imidachlorpid (Confidor) @ 4gm/litre of water. 100gm/250 litre of water is sufficient for 1 sangam. Repeat the spray at 10-15 days. - remove off type plants showing mottling, mosaic, wrinkle and leaf rolling symptom. - Cut the haulm at ground level in Jan/Feb, in the valley. Ensure no regrowth of the stem. - Harvest the crop when the skin of the tuber has become firm.



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**“Gramin Krishi Mausam Seva”**

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<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- To protect birds of all age groups from inclement weather, there should be adequate arrangements for artificial lighting and heating. - Needed to increase energy giving ingredients of feed (i.e. Maize, Wheat, Bajra etc.) and can be added 5% more.
		Ranikhet Diseases	Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers). After that at every two months interval.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	PPR (Peste Des Petits Ruminants)	- If the animals have not yet been vaccinated, give vaccine now for PPR (Peste Des Petits Ruminants).
		Enterotoxaemia	- If the Lambs and Kids in particular should be given the caccination to prevent Enterotoxaemia.
		Ectoparasitism	- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sactum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.
<b>Pig</b>	All age groups excepts the young ones	Care & management for newly born one	-Artificial lighting and heating to the piglets. -Provide adequate bedding materials.
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<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	-If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
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<b>Fishery:</b>			
Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fries/ fingerlings/ brooders	Pond and water	-Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water. -Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.
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