



**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****27<sup>th</sup> January, 2017****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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Bishnupur (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 24 – 25 °C & minimum temp. 9 – 11 °C. Relative humidity may reach up to 98 % (max RH) & 34 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be North Easterly to Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyrifos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



# ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

## “Gramin Krishi Mausam Seva”



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox @ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS



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**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Chandel (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 7 - 9 °C. Relative humidity may reach up to 94 % (max RH) & 37 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be Westerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



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## “Gramin Krishi Mausam Seva”



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<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
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<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
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#### Name of the animal

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		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
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		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

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		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
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**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Senapati (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 21 – 23 °C & minimum temp. 4 - 7 °C. Relative humidity may reach up to 99 % (max RH) & 31 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



# ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

## “Gramin Krishi Mausam Seva”



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox @ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS





**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.1 to 2.9 km/hr.

**Weather forecast for next five days of Tamenglong (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Sunday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 25 – 27 °C & minimum temp. 9 - 11 °C. Relative humidity may reach up to 99 % (max RH) & 32 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly to Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyrifos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



# ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

## “Gramin Krishi Mausam Seva”



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox @ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS



**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Thoubal (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 8 - 10 °C. Relative humidity may reach up to 97 % (max RH) & 34 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be North Easterly to Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyrifos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



# ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

## “Gramin Krishi Mausam Seva”



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS



**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Ukhrul (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 21 – 23 °C & minimum temp. 4 - 7 °C. Relative humidity may reach up to 95 % (max RH) & 34 % (min RH). The average wind speed may be 3-5 km/hr. Wind direction may be Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.





**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS



**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****27<sup>th</sup> January, 2017****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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)**

Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.0 to 3.0 km/hr.

**Weather forecast for next five days of Imphal East (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)**

Likely to have no rain upto Wednesday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 24 – 26 °C & minimum temp. 9 - 11 °C. Relative humidity may reach up to 99 % (max RH) & 31 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly to Southerly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyrifos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



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**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cauliflower</b>	Vegetative to head formation		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
		Ranikhet disease	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).
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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(I. Meghachandra Singh)  
Scientist i/c, GKMS



**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**27<sup>th</sup> January, 2017**

**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 28<sup>th</sup> January to 1<sup>st</sup> February, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> January, 2017)</b></p> <p>Observed mainly clear sky in past three days. Maximum temperature range of 24.1 to 24.3 °C and rise in minimum temperature range of 3.2 to 5.0 °C with mean relative humidity 89.0 % max and 36.7 % min was recorded in the past three days. The average wind speed range remained 2.1 to 2.9 km/hr.</p>	<p><b>Weather forecast for next five days of Imphal West (28<sup>th</sup> January to 1<sup>st</sup> February, 2017)</b></p> <p>Likely to have no rain upto Sunday. Dense fog during morning hours of 29<sup>th</sup> and 30<sup>th</sup> Jan and mainly clear sky during day time with maximum temp. 24 – 26 °C &amp; minimum temp. 8 - 10 °C. Relative humidity may reach up to 99 % (max RH) &amp; 31 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly to Southerly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Potato</b>	Vegetative to flowering		- Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
		Late Blight	- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
<b>Rapeseed/ Mustard</b>	Vegetative to flowering and fruiting		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil is dry. - Four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyrifos @ 2ml/litre of water on the infected patches only.
<b>Pulses</b>	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
<b>Rabi maize</b>	Sowing to vegetative		- Sowing of rabi maize may be done. - Irrigate field, if the soil is dry.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Banana</b>		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g Urea, 300g SSP and 500g MOP should be applied in three split doses at two, six and eight months after planting.
<b>Mango</b>	Flowering		- Flower during 1 <sup>st</sup> year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - To protect from Mango fruit fly, Methyl Eugenol trap 0.1% may be used @ 10 traps per hectare. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
<b>Citrus</b>	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.



# ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

## “Gramin Krishi Mausam Seva”



<b>Cucurbits</b>	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse. - Land preparation for transplanting may be started.
<b>French bean and Bhindi</b>	Land Preparation		Land preparation for sowing may be started.
<b>Rabi Vegetable (cole crops)</b>	Head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		- Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
<b>Tomato</b>	Vegetative		- Light watering may be done to maintain soil moisture.
<b>Garden pea/ Broad bean</b>	Vegetative to flowering		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion</b>	Vegetative		- Give light irrigation if the soil is dry. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
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<b>Spinach (Palak)</b>	Vegetative		- Light watering may be done to maintain soil moisture.

### Animal Sciences

#### Name of the animal

<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
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<b>Sheep/ Goat</b>	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Management	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
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### Fishery:

#### Type of Farming

<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.
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