



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

**MANIPUR BULLETIN****21<sup>st</sup> November, 2017****Bishnupur**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Bishnupur (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 27 - 28 °C & minimum temp. 14-15 °C and relative humidity may reach up to 81% (max RH) & 51 % (min RH). The average wind speed may be 2 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing. - After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet. - Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing. - Recommended variety – M-27. Seed rate is 10-12 kg/ ha. - Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<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 charcoal and dry if required. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 m <sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m <sup>2</sup> .
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.



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**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

### Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
<b>Pig</b>	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.

\* Partial/ total harvesting of fish should be done.

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



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**MANIPUR BULLETIN****21<sup>st</sup> November, 2017**Chandel

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Chandel (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 26 - 27 °C & minimum temp. 13-14 °C and relative humidity may reach up to 78% (max RH) & 59 % (min RH). The average wind speed may be 2-3 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		<ul style="list-style-type: none"> <li>- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul>
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		<ul style="list-style-type: none"> <li>- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet.</li> <li>- Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing.</li> <li>- Recommended variety – M-27. Seed rate is 10-12 kg/ ha.</li> <li>- Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.</li> </ul>
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<b>Seeds storage</b>	Post harvest management		<p>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 charcoal and dry if required.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>
<b>Horticulture Crops</b>			
Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		<ul style="list-style-type: none"> <li>- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects.</li> <li>- Apply 200-250 kg of FYM (@ ½ cart load) in 100 m<sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m<sup>2</sup>.</li> </ul>
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.



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<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

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		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
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**Weather forecast for next five days of Churachandpur (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 26 - 27 °C & minimum temp. 12-13 °C and relative humidity may reach up to 80% (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/hr.

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### Animal Sciences

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• Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

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Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 26 - 27 °C & minimum temp. 12-13 °C and relative humidity may reach up to 80% (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing. - After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet. - Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing. - Recommended variety – M-27. Seed rate is 10-12 kg/ ha. - Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<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 charcoal and dry if required. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 m <sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m <sup>2</sup> .
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.



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



<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

### Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
<b>Pig</b>	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.

\* Partial/ total harvesting of fish should be done.

(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****21<sup>st</sup> November, 2017****Imphal West**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Imphal West (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 26 - 27 °C & minimum temp. 12-13 °C and relative humidity may reach up to 80% (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		<ul style="list-style-type: none"> <li>- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul>
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		<ul style="list-style-type: none"> <li>- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet.</li> <li>- Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing.</li> <li>- Recommended variety – M-27. Seed rate is 10-12 kg/ ha.</li> <li>- Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.</li> </ul>
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<b>Seeds storage</b>	Post harvest management		<p>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 charcoal and dry if required.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>
<b>Horticulture Crops</b>			
Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		<ul style="list-style-type: none"> <li>- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects.</li> <li>- Apply 200-250 kg of FYM (@ ½ cart load) in 100 m<sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m<sup>2</sup>.</li> </ul>
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.



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



<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

### Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
<b>Pig</b>	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

- Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.

\* Partial/ total harvesting of fish should be done.

(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****21<sup>st</sup> November, 2017**Senapati

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Senapati (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 24 - 25 °C & minimum temp. 12-13 °C and relative humidity may reach up to 80 % (max RH) & 47 % (min RH). The average wind speed may be 3 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing. - After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet. - Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing. - Recommended variety – M-27. Seed rate is 10-12 kg/ ha. - Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<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 charcoal and dry if required. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.



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



Animal Sciences			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ / Duck)	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
Sheep/ Goat	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.
• Fodder cultivation: Oat/ Chinese cabbage/ Berseum may be grown.			
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.
* Partial/ total harvesting of fish should be done.			

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



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

**MANIPUR BULLETIN****21<sup>st</sup> November, 2017****Tamenglong**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Tamenglong (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 25 - 26 °C & minimum temp. 11-12 °C and relative humidity may reach up to 78% (max RH) & 49 % (min RH). The average wind speed may be 3-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		<ul style="list-style-type: none"> <li>- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul>
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		<ul style="list-style-type: none"> <li>- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet.</li> <li>- Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing.</li> <li>- Recommended variety – M-27. Seed rate is 10-12 kg/ ha.</li> <li>- Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.</li> </ul>
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<b>Seeds storage</b>	Post harvest management		<p>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 charcoal and dry if required.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>
<b>Horticulture Crops</b>			
Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		<ul style="list-style-type: none"> <li>- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects.</li> <li>- Apply 200-250 kg of FYM (@ ½ cart load) in 100 m<sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m<sup>2</sup>.</li> </ul>
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.





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



<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

### Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
<b>Pig</b>	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

- Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.

\* Partial/ total harvesting of fish should be done.

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



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**MANIPUR BULLETIN****21<sup>st</sup> November, 2017****Thoubal**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Thoubal (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 27 - 28 °C & minimum temp. 14-15 °C and relative humidity may reach up to 81% (max RH) & 51 % (min RH). The average wind speed may be 2 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		<ul style="list-style-type: none"> <li>- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul>
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		<ul style="list-style-type: none"> <li>- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet.</li> <li>- Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing.</li> <li>- Recommended variety – M-27. Seed rate is 10-12 kg/ ha.</li> <li>- Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.</li> </ul>
<b>Field Pea</b>	Seed collection and sowing		Land preparation may be done for sowing field pea. Sowing may be done at a spacing of 30cm X 10-15cm. Recommended variety - Rachana. Seed rate is 75 kg/ hectare.
<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<b>Seeds storage</b>	Post harvest management		<p>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 charcoal and dry if required.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>
<b>Horticulture Crops</b>			
Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Coriander</b>	Land preparation & sowing		<ul style="list-style-type: none"> <li>- Select area with bright sunshine rich in organic manure for preparing beds. Avoid water logging area. Treat seeds using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects.</li> <li>- Apply 200-250 kg of FYM (@ ½ cart load) in 100 m<sup>2</sup> and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 m<sup>2</sup>.</li> </ul>
<b>Spinach (Palak)</b>	Land preparation & sowing		- Well drained soil is best for growing spinach beet. Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 m <sup>2</sup> . If broadcasting is done, double the dose is required.



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**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Potato</b>	Tuber seed treatment and sowing		Sowing may be done at a spacing of 60cm X 15-20cm after the soil attains optimum soil moisture. Recommended varieties are Kufri Megha and Kufri Jyoti. Seed rate is 25-30 quintals/ hectare. Treat seed tubers with Sixer (Carbendazim + Mancozeb) @ 2 gm/lit of water for 20 minutes and dry in shed before planting as preventive measure against soil borne diseases before sowing. Incubation of seeds in the sand bed for at about 7-10 days for sprouting of seed is also advisable. Sow seed at about 3 inch depth.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
		Soil nutrition management	- After rains apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with soil to improve soil fertility.

### Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. • Litter must be stirred frequently and aired every day.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• Vaccinate against B.Q./ H.S. this time. • Lambs should be vaccinated against Enterotoxaemia.
		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
<b>Pig</b>	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat/ Chinese cabbage/ Berseem may be grown.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.

\* Partial/ total harvesting of fish should be done.

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Scientist i/c, GKMS



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**MANIPUR BULLETIN****21<sup>st</sup> November, 2017****Ukhrul**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 22<sup>nd</sup> to 26<sup>th</sup> November, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> November, 2017)**

Observed fair to mainly cloudy sky during past four days with **5.2 mm** rainfall. Maximum temperature range of 24.5 to 28.0 °C and minimum temperature range of 16.7 to 18.6 °C with mean relative humidity 92.3 % max and 64.3 % min was recorded in the past four days.

**Weather forecast for next five days of Ukhrul (22<sup>nd</sup> to 26<sup>th</sup> November, 2017)**

Likely to have no rains upto Sunday and shallow to moderate fog during morning hours of the next three days. Sky may remain mainly clear. The maximum temp. 24 - 25 °C & minimum temp. 12-13 °C and relative humidity may reach up to 78 % (max RH) & 55 % (min RH). The average wind speed may be 3-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Harvesting to post harvesting		- Harvest mature crops. Harvested panicles may be stacked for 5-7 days and turned regularly for better threshing. - After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
<b>Rapeseed/ Mustard</b>	Seed collection and sowing		- Zero tillage rapeseed/ mustard may be sown at 30 cm row spacing when the field is slightly wet. - Apply 65kg Urea + 188kg SSP + 50kg MOP as basal dose before sowing. - Recommended variety – M-27. Seed rate is 10-12 kg/ ha. - Treat seeds with Mancozeb @2g/kg seed and dry for 30 mins in the shade then sow for the control of white rust and Downey Mildew at seedling stage.
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<b>Lentil/ Blackgram (late variety)</b>	Seed collection and sowing		Lentil/ Blackgram (late var.) may be sown 15 days before harvesting rice as relay crop in the crop fields where the soil moisture is optimum for seed germination. Treat the seeds with Carbendazim @ 2g/kg seed and dry for 30 mins in the shade then sow it.
<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 charcoal and dry if required. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

Light watering during morning hours is advised for the rabi crops (especially in early vegetative stages).

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage</b>	Transplanting (26-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose with an interval of 20-40 days of transplanting.
<b>Cauliflower</b>	Transplanting (25-30 days old seedlings) to early vegetative		- Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose with an interval of 20-40 days after transplanting for main season crops.
<b>Onion</b>	Nursery raising		- Apply Captan 50 WP @ 2g/ litre of water during final land preparation as preventive measures against soil borne diseases. For 25 m <sup>2</sup> area we need ½ kg seeds. - check that the new sprouts/ young plants in nursery beds are not damaged.
<b>Ginger/ Turmeric</b>	Rhizome formation	Rhizome rot	- Spray Carbendazim @2.5 g/lit of water for rhizome rot.
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Animal Sciences			
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		• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
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Cattle	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S.if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies • Adopt tick control measures
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.
• Fodder cultivation: Oat/ Chinese cabbage/ Berseum may be grown.			
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.
		Feed	Provide feed 2 times @ 3-5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 10000-12000 fingerlings can be stocked in one hectare pond. Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. Sampling of fish for growth, disease should be done regularly by netting.
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