



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

**MANIPUR BULLETIN****22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>  Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Bishnupur (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>  Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 23 - 24 ° C &amp; minimum temp. 9 - 10 ° C and relative humidity may reach up to 82 % (max RH) &amp; 49 % (min RH). The average wind speed may be 0 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
<b>Tomato</b>	Vegetative	Early blight	- Apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.



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**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
		• Vaccination	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
		• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
<b>Pig</b>	All age groups except the young ones	• 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	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	- As per market demand harvesting may be started.
		Feeding	- Feeds should be provided 2 times a day.

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



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**“Gramin Krishi Mausam Seva”**



**MANIPUR BULLETIN**

**22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Chandel (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 21 - 22 ° C &amp; minimum temp. 7 - 8 ° C and relative humidity may reach up to 90 % (max RH) &amp; 54 % (min RH). The average wind speed may be 3 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
<b>Tomato</b>	Vegetative	Early blight	- Apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.



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<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	<ul style="list-style-type: none"> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Shearing for wool</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep should be sheared during this month.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Deworming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.</li> </ul>
		<ul style="list-style-type: none"> <li>• Care &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	<ul style="list-style-type: none"> <li>• Adequate care must be ensured for prevention of mastitis for the milch animals.</li> </ul>

• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	<ul style="list-style-type: none"> <li>- As per market demand harvesting may be started.</li> </ul>
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**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Senapati (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 19 - 20 ° C &amp; minimum temp. 6 - 7 ° C and relative humidity may reach up to 84 % (max RH) &amp; 46 % (min RH). The average wind speed may be 3 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.



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



<i>Animal Sciences</i>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	<ul style="list-style-type: none"> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Shearing for wool</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep should be sheared during this month.</li> </ul>
<b>Pig</b>	All age groups except the young ones	<ul style="list-style-type: none"> <li>• Coccidial infection</li> </ul>	<ul style="list-style-type: none"> <li>• Ofloxacin/ Ornidazole (O<sub>2</sub>) tab twice daily for 5 days.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albendazole @7.5 mg/kg b.wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against FMD.</li> </ul>
		<ul style="list-style-type: none"> <li>• Skin disease</li> </ul>	<ul style="list-style-type: none"> <li>• Sprayer of Anti-<i>Psoroptic</i> may be used</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		<ul style="list-style-type: none"> <li>• Deworming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.</li> </ul>
		<ul style="list-style-type: none"> <li>• Care &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	<ul style="list-style-type: none"> <li>• Adequate care must be ensured for prevention of mastitis for the milch animals.</li> </ul>
<ul style="list-style-type: none"> <li>• Fodder cultivation: Oat crop may be sown immediately.</li> </ul>			
<b>Fishery:</b>			
<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	<ul style="list-style-type: none"> <li>- As per market demand harvesting may be started.</li> </ul>
		Feeding	<ul style="list-style-type: none"> <li>- Feeds should be provided 2 times a day.</li> </ul>

(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**

**22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Tamenglong (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 19 - 20 ° C &amp; minimum temp. 6 - 7 ° C and relative humidity may reach up to 84 % (max RH) &amp; 46 % (min RH). The average wind speed may be 3 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
<b>Tomato</b>	Vegetative	Early blight	- Apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	<ul style="list-style-type: none"> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Shearing for wool</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep should be sheared during this month.</li> </ul>
<b>Pig</b>	All age groups except the young ones	<ul style="list-style-type: none"> <li>• Coccidial infection</li> </ul>	<ul style="list-style-type: none"> <li>• Ofloxacin/ Ornidazole (O<sub>2</sub>) tab twice daily for 5 days.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albendazole @7.5 mg/kg b.wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against FMD.</li> </ul>
		<ul style="list-style-type: none"> <li>• Skin disease</li> </ul>	<ul style="list-style-type: none"> <li>• Sprayer of Anti-<i>Psoroptic</i> may be used</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		<ul style="list-style-type: none"> <li>• Deworming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.</li> </ul>
		<ul style="list-style-type: none"> <li>• Care &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	<ul style="list-style-type: none"> <li>• Adequate care must be ensured for prevention of mastitis for the milch animals.</li> </ul>

• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	<ul style="list-style-type: none"> <li>- As per market demand harvesting may be started.</li> </ul>
		Feeding	<ul style="list-style-type: none"> <li>- Feeds should be provided 2 times a day.</li> </ul>

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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Thoubal (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 23 - 24 ° C &amp; minimum temp. 9 - 10 ° C and relative humidity may reach up to 85 % (max RH) &amp; 49 % (min RH). The average wind speed may be 0 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
<b>Tomato</b>	Vegetative	Early blight	- Apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.



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Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	<ul style="list-style-type: none"> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Shearing for wool</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep should be sheared during this month.</li> </ul>
<b>Pig</b>	All age groups except the young ones	<ul style="list-style-type: none"> <li>• Coccidial infection</li> </ul>	<ul style="list-style-type: none"> <li>• Ofloxacin/ Ornidazole (O<sub>2</sub>) tab twice daily for 5 days.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albendazole @7.5 mg/kg b.wt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against FMD.</li> </ul>
		<ul style="list-style-type: none"> <li>• Skin disease</li> </ul>	<ul style="list-style-type: none"> <li>• Sprayer of Anti-<i>Psoroptic</i> may be used</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		<ul style="list-style-type: none"> <li>• Deworming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.</li> </ul>
		<ul style="list-style-type: none"> <li>• Care &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	<ul style="list-style-type: none"> <li>• Adequate care must be ensured for prevention of mastitis for the milch animals.</li> </ul>

• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	<ul style="list-style-type: none"> <li>- As per market demand harvesting may be started.</li> </ul>
		Feeding	<ul style="list-style-type: none"> <li>- Feeds should be provided 2 times a day.</li> </ul>

(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****22<sup>nd</sup> December, 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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Ukhrul (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 19 - 20 ° C &amp; minimum temp. 6 - 7 ° C and relative humidity may reach up to 84 % (max RH) &amp; 46 % (min RH). The average wind speed may be 3 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.



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



<i>Animal Sciences</i>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
		• Vaccination	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
		• Vaccination	• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done 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	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.
• Fodder cultivation: Oat crop may be sown immediately.			
<b>Fishery:</b>			
<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	- As per market demand harvesting may be started.
		Feeding	- Feeds should be provided 2 times a day.

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 Scientist i/c, GKMS



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

**MANIPUR BULLETIN****22<sup>nd</sup> December, 2017***Imphal East*

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 23<sup>rd</sup> to 27<sup>th</sup> December, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> December, 2017)</b>          Observed clear to partly cloudy sky and foggy morning hours on 19<sup>th</sup> during past three days with <b>no</b> rainfall. Maximum temperature range of 21.7 to 23.2 ° C and minimum temperature range of 8.8 to 10.0 ° C with mean relative humidity 90 % max and 56.7 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Imphal East (23<sup>rd</sup> to 27<sup>th</sup> December, 2017)</b>          Likely to have no rains upto Wednesday. Morning hours are likely to have moderate to dense fog and sky may remain mainly clear during afternoon hours. The maximum temp. 22 - 23 ° C &amp; minimum temp. 8 - 9 ° C and relative humidity may reach up to 91 % (max RH) &amp; 46 % (min RH). The average wind speed may be 3 - 4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & 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>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
<b>Tomato</b>	Vegetative	Early blight	- Apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	• Management	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
		• Vaccination	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	• De-worming	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Shearing for wool	• Sheep should be sheared during this month.
		• Coccidial infection	• Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
<b>Pig</b>	All age groups except the young ones	• De-worming	• De-worm with Albendazole @7.5 mg/kg b.wt.
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<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> <li>• Vaccinate against B.Q., F.M.D. &amp; H.S. if not yet vaccinated.</li> <li>• Cases of H.S. may be encountered during this period</li> <li>• Immediate treatment using appropriate drugs with the help of Consultant must be advocated to safe the animals.</li> </ul>
		• Deworming	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
		Mastitis	• Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
		Harvest	- As per market demand harvesting may be started.
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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****22<sup>nd</sup> December, 2017**Imphal West

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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rapeseed/ Mustard/</b>	Vegetative		- Apply 75 litres @10g urea / 15 litres as foliar application after 30 days of sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches. - Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water on the infected patches only.
<b>Lentil/ Blackgram (late variety)/ Field Pea</b>	Vegetative	Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
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<b>Rabi Maize</b>	Land preparation to sowing		- Land preparation for sowing rabi maize may be done. - Rabi maize may be sown as intercrop with potato or pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<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**

\* Regular monitoring may be done for insect pest infestation.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cabbage/ Cauliflower/ Tomato/ Potato</b>	Vegetative	Aphid	- If Infestation of aphid is less, drench the plant with strong sprays of water to remove aphid/ or remove infected plant part. But if the infestation is severe, spray evenly insecticidal soap or neem oil.
		leaf eating caterpillar	- Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
<b>Cucurbits</b>	Seed collection		- Procure good quality seeds from reliable source that is suitable to the location. Preparation for raising nurseries of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.
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**“Gramin Krishi Mausam Seva”**



<b>Onion</b>	Vegetative		- Apply 64kg Urea, 44kg DAP and 34 kg MOP per sangam as basal dose followed by 64kg urea/ sangam after 30-35 days after transplanting.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Coriander/ Onion/ Garlic</b>	Vegetative		- Avoid water logging in and around the crop field.

**Animal Sciences**

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ / Duck)</b>	All age groups	<ul style="list-style-type: none"> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Protect animals/ birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time.</li> <li>• Litter must be stirred frequently and aired every day.</li> </ul>
<b>Sheep/ Goat</b>	All age groups	<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month.</li> <li>• Take adequate care to prevent occurrence of Mastitis.</li> <li>• PPR immunization must be done once in every three years.</li> </ul>
		<ul style="list-style-type: none"> <li>• De-worming</li> </ul>	<ul style="list-style-type: none"> <li>• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.</li> </ul>
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<b>Pig</b>	All age groups except the young ones	<ul style="list-style-type: none"> <li>• Coccidial infection</li> </ul>	<ul style="list-style-type: none"> <li>• Ofloxacin/ Ornidazole (O<sub>2</sub>) tab twice daily for 5 days.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccinate against FMD.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	<ul style="list-style-type: none"> <li>• Skin disease</li> </ul>	<ul style="list-style-type: none"> <li>• Sprayer of Anti-<i>Psoroptic</i> may be used</li> </ul>
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		<ul style="list-style-type: none"> <li>• Deworming</li> </ul>	<ul style="list-style-type: none"> <li>• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.</li> </ul>
		<ul style="list-style-type: none"> <li>• Care &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Mixture of mineral/ salts should be added in the feed.</li> <li>• Avoid the cattle from chiting/biting by Flies</li> <li>• Adopt tick control measures</li> </ul>
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• Fodder cultivation: Oat crop may be sown immediately.

**Fishery:**

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Grow-out	Pond water	<ul style="list-style-type: none"> <li>- Lime/ Aqua magic should be applied regularly to keep good quality pond water. Water depth should be maintained at 1.0-1.5m.</li> <li>- Replace half of pond water with fresh &amp; clean water at every 25-30 days interval.</li> <li>- Minimum feed must be provided, i.e., @ 1-2% of body weight per day.</li> </ul>
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