



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

**MANIPUR BULLETIN****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Imphal-East (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **99 % (max RH) & 75 % (min RH)**. The average wind speed may be **3-5 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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		Plant Hoppers or Thrips	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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**“Gramin Krishi Mausam Seva”**



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Duck)</b>	All age groups	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to consume muddy water to protect from <i>E.coli</i> infection. Use water sanitizer.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

(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****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Imphal-West (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **99 % (max RH) & 56 % (min RH)**. The average wind speed may be **0-2 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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		Plant Hoppers or Thrips	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

<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	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to <i>consume muddy water to protect from E.coli infection. Use water sanitizer.</i>
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
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		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****14<sup>th</sup> September, 2018**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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)</b> Observed <b>0.7 mm</b> rainfall with <b>mainly cloudy to overcast sky but partly cloudy</b> during afternoon hours of 11 <sup>th</sup> and 13 <sup>th</sup> Sept. Maximum temperature recorded ranged from <b>28.3 to 30.0 °C</b> and minimum of <b>20.0 to 22.0 °C</b> with mean relative humidity <b>89.7 %</b> max and <b>69.0 %</b> min was recorded in the past three days & average wind speed was <b>3.7– 5.4 km/ hr.</b>	<b>Weather forecast for next five days of Senapati (15<sup>th</sup> to 19<sup>th</sup> September, 2018)</b> Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. <b>28-29 °C</b> & minimum temp. <b>19-20 °C</b> . Relative humidity may reach upto <b>98 % (max RH) &amp; 70 % (min RH)</b> . The average wind speed may be <b>2-4 km/hr.</b>
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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>Rice</b>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.





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<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

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Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
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		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to <i>consume muddy water to protect from E.coli infection. Use water sanitizer.</i>
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	<ul style="list-style-type: none"> <li>• Protect from thunder showers. Protect from after winds (loo).</li> <li>• Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.</li> </ul>
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
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Scientist i/c, GKMS



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)</b> Observed <b>0.7 mm</b> rainfall with <b>mainly cloudy to overcast sky but partly cloudy</b> during afternoon hours of 11 <sup>th</sup> and 13 <sup>th</sup> Sept. Maximum temperature recorded ranged from <b>28.3 to 30.0 °C</b> and minimum of <b>20.0 to 22.0 °C</b> with mean relative humidity <b>89.7 %</b> max and <b>69.0 %</b> min was recorded in the past three days & average wind speed was <b>3.7– 5.4 km/ hr</b> .	<b>Weather forecast for next five days of Tamenglong (15<sup>th</sup> to 19<sup>th</sup> September, 2018)</b> Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. <b>28-29 °C</b> & minimum temp. <b>19-20 °C</b> . Relative humidity may reach upto <b>99 % (max RH) &amp; 65 % (min RH)</b> . The average wind speed may be <b>2-3 km/hr</b> .
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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>
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		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
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<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Duck)</b>	All age groups	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to consume muddy water to protect from E.coli infection. Use water sanitizer.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

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

**MANIPUR BULLETIN****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Thoubal (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **100 % (max RH) & 74 % (min RH)**. The average wind speed may be **2-6 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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

\* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

<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	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to <i>consume muddy water to protect from E.coli infection. Use water sanitizer.</i>
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	<ul style="list-style-type: none"> <li>• Protect from thunder showers. Protect from after winds (loo).</li> <li>• Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.</li> </ul>
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

(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****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)</b> Observed <b>0.7 mm</b> rainfall with <b>mainly cloudy to overcast sky but partly cloudy</b> during afternoon hours of 11 <sup>th</sup> and 13 <sup>th</sup> Sept. Maximum temperature recorded ranged from <b>28.3 to 30.0 °C</b> and minimum of <b>20.0 to 22.0 °C</b> with mean relative humidity <b>89.7 %</b> max and <b>69.0 %</b> min was recorded in the past three days & average wind speed was <b>3.7– 5.4 km/ hr</b> .	<b>Weather forecast for next five days of Ukhrul (15<sup>th</sup> to 19<sup>th</sup> September, 2018)</b> Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. <b>28-29 °C</b> & minimum temp. <b>19-20 °C</b> . Relative humidity may reach upto <b>96 % (max RH) &amp; 72 % (min RH)</b> . The average wind speed may be <b>3-5 km/hr</b> .
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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>Rice</b>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.



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



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Duck)</b>	All age groups	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to consume muddy water to protect from E.coli infection. Use water sanitizer.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

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

**MANIPUR BULLETIN****14<sup>th</sup> September, 2018****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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Bishnupur (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **100 % (max RH) & 59 % (min RH)**. The average wind speed may be **0-4 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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

\* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.





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



<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Duck)</b>	All age groups	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to consume muddy water to protect from <i>E.coli</i> infection. Use water sanitizer.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

(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****14<sup>th</sup> September, 2018**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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Chandel (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **97 % (max RH) & 69 % (min RH)**. The average wind speed may be **2-6 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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		Plant Hoppers or Thrips	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
		Any sucking insect	Imidachloprid @ 8ml/ 15 litres of water .
<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		<ul style="list-style-type: none"> <li>- After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean.</li> <li>- Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.</li> </ul>
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Avoid water logging in and around the crop field.</li> </ul>

### Animal Sciences

\* Provide clean drinking water for birds and animals. Drainage may be constructed well around the birds or animals sheds to avoid water logging.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Duck)</b>	All age groups	• Vaccination	• Vaccinate birds against Fowl Pox.
		• Deworming	• Deworming against Helminth parasites using Piperazine liquid @ 30-40ml for 100 birds in drinking water. Again give half of the dose on second day.
		• Management	• Do not allow to consume muddy water to protect from E.coli infection. Use water sanitizer.
<b>Sheep/ Goat</b>	All age groups	• Vaccination	• If the animals are not vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. do it in this month.
		• Fascioliosis	• Give Tolzan-F @ 15ml orally/ kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
		• Management	• Protect from thunder showers. Protect from after winds (loo). • Avoid flies by using Basil/ bouquets of Nirgundi or lemon grass by hanging.
<b>Pig</b>	All age groups except the young ones	• De-worming	• Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		• Coccidial infection (Diarrhea)	• Ofloxacin tab twice daily for 5 days.
		• Ticks	• Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		• Vaccination	• Vaccinate against FMD.
		• Management	• Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle</b>	All age groups excepts the young ones	• Vaccination	• Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated.
		• Deworming	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Endoparasite/ Ectoparasite	• Inject Ivomec @ 1 ml/ 50 kg body weight.
		• Care & Management	• Give mineral mixture @ 30-50g daily.
		• Milk fever	• Give 100-150ml of mixture calcium and phosphorous daily.

### Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	If the colour or odour of pond water changes, then replace with the fresh water. Well balanced fortified feed with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits. 8000-10,000 fingerlings/ha can be stocked.
	Nurseries		Apply agri-lime @ 250kg/ha at valley and 300kg at hilly areas. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha pond for 15 days

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**MANIPUR BULLETIN****14<sup>th</sup> September, 2018****Churachandpur**

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 15<sup>th</sup> to 19<sup>th</sup> September, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 13<sup>th</sup> September, 2018)**

Observed **0.7 mm** rainfall with **mainly cloudy to overcast sky but partly cloudy** during afternoon hours of 11<sup>th</sup> and 13<sup>th</sup> Sept. Maximum temperature recorded ranged from **28.3 to 30.0 °C** and minimum of **20.0 to 22.0 °C** with mean relative humidity **89.7 %** max and **69.0 %** min was recorded in the past three days & average wind speed was **3.7– 5.4 km/ hr.**

**Weather forecast for next five days of Churachandpur (15<sup>th</sup> to 19<sup>th</sup> September, 2018)**

Likely to have moderate to heavy rains from Sunday and mainly cloudy to overcast sky with maximum temp. **30-35 °C** & minimum temp. **22-25 °C**. Relative humidity may reach upto **99 % (max RH) & 69 % (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>	Milky and dough stage		- Maintain water level at 5-8 cm. As there is likely to have moderate to heavy rains at isolated places from Sunday, provisions may be made to avoid water logging in the field.
		Aphid, mealy bugs	Spray Fipronil @ 2g/15 litres or Imidachloprid 17.8 SL @ 7 ml/ 15 litres of water after rains.
		<b>Plant Hoppers or Thrips</b>	Spray Coragen 3-5 ml per 15 lit of water after rains at the early stage of infestation.
		Sheath blight/ Bakani	Carbendazim @ 30-40g/ 15 lit of water or Hexaconazole @ 15ml/ 15 lit of water after rains.
		Smut disease of rice	Kocide @ 5g/15lit water (spray after 2:00 pm only) to the crops in flowering stage after rains.
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<b>Soybean/ Groundnut</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Blackgram/ Rice Bean</b>	Fruiting to seed maturity		- Weeding may be done if weed population is high after rains.
<b>Seeds storage</b>	Post-harvest management		For seed purpose store the seeds in <b>RC-Seed Bin</b> after proper drying and cleaning of seeds along with dry charcoal at 80:20 w/w ratios. Check for moisture content or weight of charcoal and dry if required. For grains, store grains in well ventilated godowns after drying properly. Spray Malathion 1% on the walls of stores.

**Horticulture Crops**

\* For nurseries, dip root in Carbendazim @ 10g/ 5 lit water for 30 min before transplanting in raised beds.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Tree bean</b>	Trees above 7yrs age/ Bearing plants		Apply (60gm DAP + 10g MOP + 20g Carbofuran 3G / per plant.
<b>Cauliflower</b>	Vegetative stage of main season crop	Plutella Diamondback moth	- To kill early weeds shallow cultivation should be given using hoe or khurpi. - Check for infestation of Plutella Diamondback moth in young plants. If the plant is young then hand picking is advised otherwise neem based pesticides may be sprayed.
	nursery of late crop		- Raise late crop cauliflower nursery. - Sterilize nursery bed soil. Soil fumigation/ soil solarization may be done for both weeds and soil microbes. For this chemical or bioagents may be used as per choice. - Mix seeds with soil for better distribution of seeds while broadcasting and maintain a spacing of 2 inches between rows.
<b>Potato</b>	Land preparation		- Select the area with fertile and sandy loam soil. Land preparation for planting potato for early crop and also for production of seed may be started in foothills and upland area.



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