



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

**MANIPUR BULLETIN****4<sup>th</sup> August, 2017****Bishnupur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Bishnupur (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 33 - 34 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 89 % (min RH). The average wind speed may be 2-4 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Maize</b>	Vegetative cob formation		- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.



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**“Gramin Krishi Mausam Seva”**



	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

### Animal Sciences

**\* Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.

### Fishery:

**\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**

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



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**MANIPUR BULLETIN****4<sup>th</sup> August, 2017**Chandel

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**Weather forecast for next five days of Chandel (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 30 - 32 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 91 % (min RH). The average wind speed may be 2-4 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Maize</b>	Vegetative cob formation		- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
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**Horticulture Crops**

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<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
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<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

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		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
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**Fishery:**

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Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
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**Field Crops**

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

**MANIPUR BULLETIN****4<sup>th</sup> August, 2017**Senapati

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Senapati (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 33 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 97 % (max RH) & 85 % (min RH). The average wind speed may be 2 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Maize</b>	Vegetative cob formation		- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.



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



	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

### **Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

### **Fishery:**

**\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**

(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****4<sup>th</sup> August, 2017****Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Tamenglong (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 30 - 31 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 81 % (min RH). The average wind speed may be 2 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Maize</b>	Vegetative cob formation	Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.



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**“Gramin Krishi Mausam Seva”**



	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.

**Fishery:**

**\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**

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**MANIPUR BULLETIN****4<sup>th</sup> August, 2017****Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Thoubal (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 32 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 93 % (min RH). The average wind speed may be 2-4 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Maize</b>	Vegetative cob formation		- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
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**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.



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	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension @60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

**\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**

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



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****4<sup>th</sup> August, 2017****Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Ukhrul (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 33 °C & minimum temp. 24 - 25 °C. Relative humidity may reach up to 98 % (max RH) & 86 % (min RH). The average wind speed may be 2-3 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Maize</b>	Vegetative cob formation		- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.





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



	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension @60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

**\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**

(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****4<sup>th</sup> August, 2017****Imphal East**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)**

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of 3<sup>rd</sup> August. No rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 °C and minimum temperature range of 23.6 to 24.2 °C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

**Weather forecast for next five days of Imphal East (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 32 - 33 °C & minimum temp. 22 - 23 °C. Relative humidity may reach up to 98 % (max RH) & 89 % (min RH). The average wind speed may be 2 km/hr.

**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	Transplanting to tillering (kharif rice)		<ul style="list-style-type: none"> <li>- If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>- Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>- In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Bacterial leaf blight	- Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).
		Any sucking insect	- Imidachloprid @ 8ml/ 15 litres of water.
		Case worm, borer, leaf folder, thrips	- Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Maize</b>	Vegetative cob formation	Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml/ha.
<b>Soybean / Groundnut</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative	hairy caterpillars	<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>- For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger</b>	Vegetative to rhizome formation		Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/ lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days interval for 2-3 times.
<b>Turmeric</b>	Vegetative	Leaf Spot and leaf blotch	<ul style="list-style-type: none"> <li>- Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch at 7 days interval after rain.</li> <li>- Drain out excess water to avoid water logging to avoid soft rot.</li> </ul>
<b>Cauliflower and Tomato</b>	Nursery of mid season variety		- Use temporary rain shelter facility/ low cost polyhouse for raising nursery. Protect nursery from damping off. Fumigate the soil with formaldehyde drench the soil with Captan 50WP.
<b>Cauliflower</b>	Transplanting to early vegetative	Plutella Diamond	- Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ White Shot/ White treasure) at a spacing of 45cm x 45cm.

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**“Gramin Krishi Mausam Seva”**

	(early variety)	black moth	- Check for infestation of Plutella Diamond black moth in young plants.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
<b>Onion</b>	Sowing/ planting		- This is the season for sowing of onion in the upland areas.
<b>Banana</b>	For old orchard		- Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit.

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Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension @60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	- Provide clean and wholesome water. Keep animals in safe place. Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:****\* Encircle fish ponds with happa net to avoid escape of fishes during rainy days.**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Drain out excess water accumulated in fish pond due to rain.
		Feed	Provide feed 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
		Fish	For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond. - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder. - Sampling of fish for growth, disease should be done regularly by netting.
<b>Integrated Fish Farming</b>	Fish	Same as grow out fish management	Same as grow out fish farming management.
	Pig		About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

**Apply Agri lime in the fish culture pond after the water level reaches normal depth after flood @ 30-35 kg /ha at 30days interval.**(I. Meghachandra Singh)  
Scientist i/c, GKMS



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**MANIPUR BULLETIN****4<sup>th</sup> August, 2017****Imphal West**

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**Weather forecast for next five days of Imphal West (5<sup>th</sup> to 9<sup>th</sup> August, 2017)**

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**Field Crops**

\* Crops must be exposed to sun for at least three hours after spraying of the following insecticide and pesticides. Hence they must be applied if there is probability of no rain for at least three hours.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
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**Horticulture Crops**

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

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**Animal Sciences****\* Provide clean drinking water for birds and animals.**

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<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	- Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension @60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
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Scientist i/c, GKMS