



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

**MANIPUR BULLETIN****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Ukhrul (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 26 - 29 °C &amp; minimum temp. 19 - 21 °C. Relative humidity may reach up to 98 % (max RH) &amp; 85 % (min RH). The average wind speed may be 3-4 km/hr.</p>
---	--

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Imphal East (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 28 - 31 °C &amp; minimum temp. 21 - 22 °C. Relative humidity may reach up to 99 % (max RH) &amp; 81 % (min RH). The average wind speed may be 2 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 2017****Imphal West**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Imphal West (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 27 - 30 °C &amp; minimum temp. 20 - 22 °C. Relative humidity may reach up to 99 % (max RH) &amp; 85 % (min RH). The average wind speed may be 2 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

SMS

Lakliba Yumjakeisa faoba nong chuba yai. Tha faraba nung hawai amadi leibak hawaida tilkha ngakthoknaba nong hangaga hectare amada 0.75 kg a.i. Simazine happiyu. Sha- shangi unsada til leitanaba Himax ointment teibiyu.

wq

(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****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Bishnupur (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 28 - 31 °C &amp; minimum temp. 21 - 22 °C. Relative humidity may reach up to 99 % (max RH) &amp; 81 % (min RH). The average wind speed may be 2 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 2017****Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Chandel (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 28 - 31 °C &amp; minimum temp. 21 - 23 °C. Relative humidity may reach up to 98 % (max RH) &amp; 87 % (min RH). The average wind speed may be 3-5 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 2017****Churachandpur**

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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Churachandpur (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 27 - 30 °C &amp; minimum temp. 21 - 23 °C. Relative humidity may reach up to 99 % (max RH) &amp; 83 % (min RH). The average wind speed may be 2-3 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Senapati (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 26 - 29 °C &amp; minimum temp. 19 - 21 °C. Relative humidity may reach up to 98 % (max RH) &amp; 84 % (min RH). The average wind speed may be 2 km/hr.</p>
---	--

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Tamenglong (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 28 - 31 °C &amp; minimum temp. 21 - 23 °C. Relative humidity may reach up to 98 % (max RH) &amp; 85 % (min RH). The average wind speed may be 2 km/hr.</p>
---	--

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 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****16<sup>th</sup> June, 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 17<sup>th</sup> to 21<sup>st</sup> June, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (13<sup>th</sup> to 15<sup>th</sup> June, 2017)</b>          Observed mainly clear to partly cloudy but mainly cloudy during afternoon hours of 8<sup>th</sup> June and <b>48.6 mm</b> rainfall was recorded during past four days. Maximum temperature range of 26.0 to 33.1 °C and minimum temperature range of 22.4 to 23.5 °C with mean relative humidity 86.5 % max and 74.5 % min was recorded in the past four days.</p>	<p><b>Weather forecast for next five days of Thoubal (17<sup>th</sup> to 21<sup>st</sup> June, 2017)</b>          Likely to have widespread heavy rainfall over Manipur with mainly cloudy to overcast sky and maximum temp. 27 - 30 °C &amp; minimum temp. 20 - 22 °C. Relative humidity may reach up to 99 % (max RH) &amp; 82 % (min RH). The average wind speed may be 2-4 km/hr.</p>
---	---

<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>	Grain filling (Pre-kharif rice)		- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Manage proper drainage system in and around the crop field.
	Nursery to land preparation for transplanting (kharif rice)		- Maintain water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
<b>Maize</b>	Vegetative		- After rain weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram &amp; Rice bean</b>	Sowing to vegetative		- Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid sowing in water logged fields.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cauliflower</b>	Nursery		- Preparation of nursery may be started for early cauliflower in the upland area or in rain protected structures if available.
<b>Colocasia</b>	Vegetative	Alternaria leaf spot	Apply foliar spray of Trichoderma @ 10gm/ litre of water at 7 days interval.
<b>Cowpea</b>	Sowing		Seeds may be sown after rains in prepared bed with spacing of 10-15cm between seeds and 45-60 cm between rows. For present season varieties recommended are- Pusa Barsati, Pusa Do- fasli & Long green.
<b>Tree bean</b>	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting .
<b>French Bean/ Bhindi</b>	Flowering and fruiting to harvesting		- Hand weeding may be done after rains. - Retain healthy disease free fruits for seeds.
<b>Ginger/ Turmeric</b>	Vegetative	Leaf Spot	To prevent Leaf Spot disease, apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/l of water after rains.
<b>Tomato/ Brinjal</b>	Flowering and fruiting to harvesting		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation after rains.



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



<b>Chilli/ capsicum</b>	Flowering and fruiting to harvesting		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation after rains.
-------------------------	--------------------------------------	--	---

**Animal Sciences**

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

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

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.
<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. & H.S.
		Deworming	Deworm with Tolzan- F
		Management	➤ Provide wholesome water. ➤ Protection from high temp may be ensured. ➤ Electrolytes in the form of powder/ liquid may be given. ➤ Increase salt level in feed.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fis hes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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