



**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)</u></p> <p>The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. <b>62.1 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.</p>	<p><u>Weather forecast for next five days of Chandel (10<sup>th</sup> to 14<sup>th</sup> May, 2014)</u></p> <p>Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 27.0 – 30.0 °C &amp; minimum temp. 16.0 – 19.0 °C. Relative Humidity may reach a maximum of 91 % (maximum RH) &amp; 59 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.</p>
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**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		<ul style="list-style-type: none"> <li>- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water.</li> <li>- Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.</li> </ul>
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	<ul style="list-style-type: none"> <li>- Prepare good drainage to avoid water logging.</li> <li>- Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.</li> </ul>
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.</li> <li>- Rodent management should be done in and around godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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



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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. **62.1 mm** rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.

Weather forecast for next five days of Churachandpur (10<sup>th</sup> to 14<sup>th</sup> May, 2014)

Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 25.0 – 29.0 °C & minimum temp. 16.0 – 19.0 °C. Relative Humidity may reach a maximum of 98 % (maximum RH) & 65 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns. - Rodent management should be done in and around godowns.
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)</u></p> <p>The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. <b>62.1 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal - East (10<sup>th</sup> to 14<sup>th</sup> May, 2014)</u></p> <p>Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 24.0 – 29.0 °C &amp; minimum temp. 16.0 – 18.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) &amp; 79 % (minimum RH). The average wind speed may be 2 km/hr during next five days.</p>
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**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

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Thunderstorm would occur at isolated places over Manipur.

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Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
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<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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**Animal Sciences**

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**Fishery:**

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<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
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		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
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**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

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The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. **62.1 mm** rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.

Weather forecast for next five days of Imphal - West (10<sup>th</sup> to 14<sup>th</sup> May, 2014)

Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 25.0 – 28.0 °C & minimum temp. 15.0 – 17.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 82 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns. - Rodent management should be done in and around godowns.
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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





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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)</u></p> <p>The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. <b>62.1 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.</p>	<p><u>Weather forecast for next five days of Senapati (10<sup>th</sup> to 14<sup>th</sup> May, 2014)</u></p> <p>Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 24.0 – 28.0 °C &amp; minimum temp. 13.0 – 16.0 °C. Relative Humidity may reach a maximum of 98 % (maximum RH) &amp; 76 % (minimum RH). The average wind speed may be 2 km/hr during next five days.</p>
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**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		<ul style="list-style-type: none"> <li>- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water.</li> <li>- Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.</li> </ul>
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	<ul style="list-style-type: none"> <li>- Prepare good drainage to avoid water logging.</li> <li>- Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.</li> </ul>
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.</li> <li>- Rodent management should be done in and around godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. **62.1 mm** rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.

Weather forecast for next five days of Tamenglong (10<sup>th</sup> to 14<sup>th</sup> May, 2014)

Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 26.0 – 30.0 °C & minimum temp. 15.0 – 18.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 80 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns. - Rodent management should be done in and around godowns.
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. **62.1 mm** rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.

Weather forecast for next five days of Thoubal (10<sup>th</sup> to 14<sup>th</sup> May, 2014)

Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 25.0 – 29.0 °C & minimum temp. 15.0 – 18.0 °C. Relative Humidity may reach a maximum of 97 % (maximum RH) & 71 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns. - Rodent management should be done in and around godowns.
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. **62.1 mm** rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.

Weather forecast for next five days of Ukhrul (10<sup>th</sup> to 14<sup>th</sup> May, 2014)

Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 24.0 – 27.0 °C & minimum temp. 13.0 – 15.0 °C. Relative Humidity may reach a maximum of 92 % (maximum RH) & 63 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
<b>Soybean</b>	Sowing		Sowing may be done at spacing of 45 cm x 30 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate is 40-45 kg/ha or 10-11.3 kg of seed /sangam and the recommended variety is J.S.335.
<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
<b>Blackgram</b>	Land preparation to sowing		Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns. - Rodent management should be done in and around godowns.
<b>Horticulture Crops</b>			
<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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<b>Cucurbits</b> (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- After the wet spell, harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademeton 25WP) @ 0.7 g/ lit of water may be done twice at 10 & 14 days intervals respectively against Powdery mildew or Downey mildew specially in damped or moist area. - Avoid water logging in the field.
<b>Tomato/ Chilli</b>	Fruiting to harvest		- Avoid water logging in the crop field. - Retain mature and healthy fruits for seeds.
		Fruit rot	Avoid water logging and after rains spray Dithane M-45 @ 2 g/ lit of water twice at 7 days interval or Mirador (Azoxystrobin 23%) @ 1ml/ lit of water.
<b>Turmeric</b>	Sowing of turmeric		- Before planting treat seed rhizome with Sixer @ 2g/ kg seed or Trichoderma harzianum @ 10g/ kg seed or Carbendazim @ 2g/ kg seed. Maintain spacing at 25cm X 40-45cm.

**Animal Sciences**

\* Measures against mosquitoes breeding may be taken up. Also, use net to avoid entry of mosquitoes in the shed.

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- Deworm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
		FMD	- Vaccinate against FMD @ 5ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	FMD	- Vaccinate against FMD after the age of 3 months.
		Endoparasite	- Administer Albend liq. @ 15 ml orally once and repeat after 7 days.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Fascioliosis	- Deworm orally once using Tolzan-F @ 90ml/ 300 kg body weight.
		Skin infection	- Add Butox @ 2ml in 1 lit of water and brush the animal using the solution, twice a week.

**Fishery:**

- Do not allow rain water to drain directly into the culture pond as it may cause diseases in fishes. Encircle the ponds with nylon/plastic nets in order to prevent escape of fish during heavy rains.

<b>Carp culture</b>	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to keep pH at around 7.0-7.5 with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns - Prior fish stocking ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. - Apply lime @300kg/ha. pH of pond water should be maintained at 7.0-7.5. - Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
		Fish	8000-10,000 fingerlings can be stocked per ha. Sampling of fish for growth, diseases (if any) should be done by regular netting.
		Feed	Well balanced feed should be provided @ 3-5% body weight per day in 2-3 splits.
<b>Paddy cum fish culture</b>	Field		Trenches/channels in rice field with a depth of 1.0-1.5m should be made. 30-40% of the field can be converted into trench/pond for fish culture.
<b>Cat fish (Ngakra)</b>	Pond and water		Pond water depth may be maintained at 0.5 m - 0.8 m.
	Fish		5000 fish can be stocked in one hectare. Male and female brooders should be maintained in separate tanks for successful breeding.
	Feed		Feed with high protein content 35-40% CP should be given @ 5-8% body weight.

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





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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**9<sup>th</sup> May, 2014**

**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 10<sup>th</sup> to 14<sup>th</sup> May, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 8<sup>th</sup> May, 2014)</u></p> <p>The sky was mainly cloudy to cloudy but mainly clear during morning hours of 6<sup>th</sup> May. <b>62.1 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 30.8 °C, range of minimum temperature observed was 16.4 – 17.0 °C, mean relative humidity observed in morning and afternoon were 85.67 % and 73.0 % respectively. The average wind speed range was 1.1 – 6.0 km/hr.</p>	<p><u>Weather forecast for next five days of Bishnupur (10<sup>th</sup> to 14<sup>th</sup> May, 2014)</u></p> <p>Moderate to heavy rains are likely upto Sunday then light to moderate rain upto Wednesday. Sky may be mainly cloudy to cloudy upto Monday then mainly clear to partly cloudy with maximum temp. of 26.0 – 30.0 °C &amp; minimum temp. 16.0 – 18.0 °C. Relative Humidity may reach a maximum of 98 % (maximum RH) &amp; 72 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.</p>
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**Main Weather Observations**

Low/ medium clouds are seen over parts of northeastern States.

**Nowcast Warnings (From 1130 hours IST to 1430 hours IST)**

Thunderstorm would occur at isolated places over Manipur.

**Weather Warning during next 3 days \***

Thundersquall would occur at isolated places over Manipur on 9<sup>th</sup> May.

Isolated heavy to very heavy rainfall would occur over Manipur on 9<sup>th</sup> & 11<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014**

Rain/thundershowers would continue to occur at many places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
* Harvest rain water. Construct proper drainage system in and around the crop field also avoid water logging.			
<b>Field Crops</b>			
<b>Early kharif rice</b>	Tillering		- After rains, apply 30.0 kg Urea/ha at 25 to 30 days after transplanting, after complete removal of water. - Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. Drain out excess water accumulated due to rain.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Prepare good drainage to avoid water logging. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line after this wet spell.
	<b>For Kharif Maize:</b> Sowing		For high altitude sowing spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm.
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<b>Groundnut</b>	Sowing		Seed rate is 100-110 kg of Kernal/ha and the recommended varieties are ICGS-75 and JL-24. Sowing may be done at spacing of 30 cm x 15 cm after rains. It is recommended to apply 44 kg of urea, 375kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing.
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<b>Cowpea/ French bean/ Okra</b>	Sowing		- Just after uprooting/ harvesting of onion, sow cowpea/ french bean/ okra.



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		Feed	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day
		Fish	20-30 million spawn can be stocked in 1 ha pond.
	Grow -out	Pond and water	Regular manuring with a slurry of RCD @ 1500kg/ha at interval of 30 days should be done.
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