



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Churachandpur (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 18.0 – 21.0 °C. Relative Humidity may reach a maximum of 96 % (maximum RH) & 39 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.</li> </ul>
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	<ul style="list-style-type: none"> <li>- Maintain optimum soil moisture. Drain out excess water.</li> <li>- Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.</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 SSP or 130 kg 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 /sangan 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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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**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Imphal - East (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 20.0 – 22.0 °C. Relative Humidity may reach a maximum of 97 % (maximum RH) & 45 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH.
		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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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 BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Imphal - West (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 29.0 – 32.0 °C & minimum temp. 19.0 – 21.0 °C. Relative Humidity may reach a maximum of 97 % (maximum RH) & 46 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.





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Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
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		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
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Paddy cum fish culture	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.
Cat fish (Ngakra)	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 BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

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Weather forecast for next five days of Senapati (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 26.0 – 30.0 °C & minimum temp. 13.0 – 16.0 °C. Relative Humidity may reach a maximum of 93 % (maximum RH) & 43 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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



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Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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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**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Tamenglong (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 29.0 – 32.0 °C & minimum temp. 20.0 – 22.0 °C. Relative Humidity may reach a maximum of 97 % (maximum RH) & 45 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 /sangan 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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



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Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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)  
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**ICAR Research Complex for N.E.H. Region  
Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Thoubal (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 19.0 – 21.0 °C. Relative Humidity may reach a maximum of 94 % (maximum RH) & 38 % (minimum RH). The average wind speed may be 4 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 /sangan 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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



**“Integrated Agromet Advisory Services”**

Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH.
		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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)</u>  The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10 <sup>th</sup> and 12 <sup>th</sup> May respectively. <b>125.3 mm</b> rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.	<u>Weather forecast for next five days of Ukhrul (14<sup>th</sup> to 18<sup>th</sup> May, 2014)</u>  Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 25.0 – 29.0 °C & minimum temp. 12.0 – 15.0 °C. Relative Humidity may reach a maximum of 82 % (maximum RH) & 36 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.
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**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.</li> </ul>
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	<ul style="list-style-type: none"> <li>- Maintain optimum soil moisture. Drain out excess water.</li> <li>- Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.</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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.





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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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



**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Bishnupur (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 29.0 – 31.0 °C & minimum temp. 20.0 – 21.0 °C. Relative Humidity may reach a maximum of 95 % (maximum RH) & 40 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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**“Integrated Agromet Advisory Services”**

Cucurbits (Water-melon, pumpkin, sponge gourd, etc.)	Flowering & fruiting to harvesting	Powdery mildew or Downey mildew	- Harvest mature fruits then prophylactic spray of Mirador (Azoxystrobin 23%) @ 1ml/ lit of water or Bayleton (Triademiton 25WP) @ 0.7 g/ lit of water may be done twice at 10 &14 days intervals respectively against Powdery mildew or Downey mildew especially in damped or moist area. - Drain out accumulated/ excess water in the field. - Sow cucurbits in upland area or under polyhouse.
Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
* Avoid breeding of mosquitoes in and around the animal/ birds shed. Also, use net to avoid entry of mosquitoes in the shed.			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Levamisole Hydrochloride. - Potash granules may be added in the drinking water of poultry. - An antibiotic course may be given for 5 days.
		Ranikhet	Vaccinate with Lasota F-1 strain vaccine @ 1 drop on eyes or nostril to 7 days old bird and repeat it when the bird is 30 days old.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	B.Q. & H.S.	- After de-worming, vaccinate using B.Q., H.S. polyvalent.
		Fascioliosis	- De-worm 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:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH.
		Feed	- Apply a mixture of raw cow dung @ 5000kg/ha +75 kg urea + 75kg SSP in nursery pond water 15 days before spawn stocking.
		Fish	Well balanced feeds should be provided 2-3 times a day @ 5-10% body weight/day 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.
Paddy cum fish culture	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.
Cat fish (Ngakra)	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**

**13<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 14<sup>th</sup> to 18<sup>th</sup> May, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> May, 2014)

The sky was mainly cloudy to cloudy but partly cloudy and mainly clear during afternoon hours of 10<sup>th</sup> and 12<sup>th</sup> May respectively. **125.3 mm** rainfall was recorded during past four days. Maximum temperature range observed was 20.3 – 29.0 °C, range of minimum temperature observed was 16.5 – 19.0 °C, mean relative humidity observed in morning and afternoon were 98.5 % and 83.5 % respectively. The average wind speed range was 0.4 – 2.7 km/hr.

Weather forecast for next five days of Chandel (14<sup>th</sup> to 18<sup>th</sup> May, 2014)

Likely to have light rain upto Sunday. Sky may be mainly clear to partly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 19.0 – 21.0 °C. Relative Humidity may reach a maximum of 94 % (maximum RH) & 38 % (minimum RH). The average wind speed may be 4 km/hr during next five days.

**Main Weather Observations**

Convective clouds are seen over parts of Manipur.

**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 during 13<sup>th</sup> to 15<sup>th</sup> May.

**Weather Outlook for subsequent 4 days from 16<sup>th</sup> to 20<sup>th</sup> May 2014**

Rain/thundershowers would occur at few places over northeastern states.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<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.
<b>Maize</b>	<b>For Rabi Maize:</b> Cob formation	Cob borer	- Maintain optimum soil moisture. Drain out excess water. - Drenching of Carbofuran 3G @ 20 kg/ ha near soil line may be done to prevent cob borer.
	<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 SSP or 130 kg 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 SSP or 130 kg 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		- Sow cowpea/ french bean/ okra.



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Tomato/ Chilli	Flowering & fruiting to harvesting		- Maintain optimum soil moisture by draining out excess water 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.
Turmeric	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			
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Sheep/ Goat	Above 3 months of age (as and when required)	Deworming	- Minthal bolus @ ½ bolus for 20 kg body weight orally.
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Fishery:			
Carp culture	breeding	Pond and water	- Bund breeding can be started. - Water quality in breeding pool should be clean, apply lime to maintain optimum pH with high dissolved oxygen for intensive induced breeding programme.
	nurseries	Pond and water	- Pond management should be started for stocking fish spawns. Maintain water depth at 1.0-1.5m. Apply lime @300kg/ha to maintain optimum pH. - 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.
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