



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)

During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. **58.2 mm** rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.

Weather forecast for next five days of Chandel (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 21.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 96 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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



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**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

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Weather forecast for next five days of Churachandpur (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 27.0 – 30.0 °C & minimum temp. 20.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 97 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)</u></p> <p>During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. <b>58.2 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal-East (21<sup>st</sup> to 25<sup>th</sup> June, 2014)</u></p> <p>There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 28.0 – 30.0 °C &amp; minimum temp. 20.0 – 23.0 °C. Relative Humidity may reach a maximum of 100 % (maximum RH) &amp; 96 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.</p>
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**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		<ul style="list-style-type: none"> <li>- Hand weeding may be done or use rotatory weeder for weeding.</li> <li>- Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.</li> </ul>
	Sowing of <i>Main Kharif</i> rice		<ul style="list-style-type: none"> <li>- Use certified seeds for sowing. Rate: 60 kg/ ha.</li> <li>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.</li> <li>- Soak seeds for 24hrs then incubate before sowing.</li> <li>- Rice field may be prepared for nursery rising before 20-25 days of sowing.</li> </ul>
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		<ul style="list-style-type: none"> <li>- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> </ul>
<b>Blackgram</b>	Sowing to vegetative		<ul style="list-style-type: none"> <li>- Weeding may be done after rains if the weed population is high.</li> <li>- Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.</li> </ul>
<b>Rice bean</b>	Sowing to early vegetative		<ul style="list-style-type: none"> <li>- Seed rate: 20 kg/ha.</li> <li>- Sow by dibbling (row to row spacing of 45cm).</li> </ul>
<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> </ul>
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		<ul style="list-style-type: none"> <li>- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m<sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.</li> </ul>





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**Imphal-West**

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<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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

<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)

During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. **58.2 mm** rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.

Weather forecast for next five days of Senapati (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 26.0 – 29.0 °C & minimum temp. 18.0 – 21.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 95 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)

During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. **58.2 mm** rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.

Weather forecast for next five days of Tamenglong (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 27.0 – 31.0 °C & minimum temp. 21.0 – 24.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 97 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)

During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. **58.2 mm** rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.

Weather forecast for next five days of Thoubal (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 27.0 – 30.0 °C & minimum temp. 20.0 – 23.0 °C. Relative Humidity may reach a maximum of 100 % (maximum RH) & 97 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.





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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

(I. Meghachandra Singh)  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)</u></p> <p>During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. <b>58.2 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.</p>	<p><u>Weather forecast for next five days of Ukhrul (21<sup>st</sup> to 25<sup>th</sup> June, 2014)</u></p> <p>There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 26.0 – 28.0 °C &amp; minimum temp. 17.0 – 19.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) &amp; 94 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.</p>
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**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		<ul style="list-style-type: none"> <li>- Hand weeding may be done or use rotatory weeder for weeding.</li> <li>- Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.</li> </ul>
	Sowing of <i>Main Kharif</i> rice		<ul style="list-style-type: none"> <li>- Use certified seeds for sowing. Rate: 60 kg/ ha.</li> <li>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.</li> <li>- Soak seeds for 24hrs then incubate before sowing.</li> <li>- Rice field may be prepared for nursery rising before 20-25 days of sowing.</li> </ul>
<b>Maize</b>	<i>Kharif Maize:</i> vegetative		<ul style="list-style-type: none"> <li>- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> </ul>
<b>Blackgram</b>	Sowing to vegetative		<ul style="list-style-type: none"> <li>- Weeding may be done after rains if the weed population is high.</li> <li>- Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.</li> </ul>
<b>Rice bean</b>	Sowing to early vegetative		<ul style="list-style-type: none"> <li>- Seed rate: 20 kg/ha.</li> <li>- Sow by dibbling (row to row spacing of 45cm).</li> </ul>
<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> </ul>
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		<ul style="list-style-type: none"> <li>- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m<sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

Name of the animal	Growth stage	Disease/infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Endoparasites	- De-worm using Piperazine citrate. - Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.
		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
		Deworming	Deworm with Tolzan F @ 90cc/ 300 kg b.wt.
		B.Q./ H.S.	Vaccinate against B.Q./ H.S. sub- cutaneously.

**Fishery:**

- Encircle pond with net to avoid escape of fish during rainy days.

<b>Carp culture</b>	nurseries	Pond and water	- Maintain water depth at 1.0-1.5m for stocking fish spawns. Apply lime @300kg/ha. 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 one ha pond.
	Grow -out	Pond and water	Regular manuring may be done with a slurry of Raw Cow Dung @1500kg/ha at 30 days interval.
		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 may be converted into trench/pond for fish culture.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**20<sup>th</sup> June, 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 21<sup>st</sup> to 25<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 19<sup>th</sup> June, 2014)

During past three days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 18<sup>th</sup> June. **58.2 mm** rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 30.5 °C, range of minimum temperature observed was 21.9 – 23.0 °C, mean relative humidity observed in morning and afternoon were 92.0 % and 78.7 % respectively. The average wind speed range was 1.2 – 2.1 km/hr.

Weather forecast for next five days of Bishnupur (21<sup>st</sup> to 25<sup>th</sup> June, 2014)

There may be moderate to heavy rains upto Monday. Sky may be mainly cloudy to cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 21.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 97 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows convective clouds over some parts northeast India

**Weather warnings upto 22<sup>nd</sup> June, 2014**

Isolated heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 23<sup>rd</sup> to 27<sup>th</sup> June, 2014**

Rain/thundershowers would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
* Avoid water logging in the crop fields.			
<b>Rice</b>	Milky dough to grain filling stage in early kharif rice		- Hand weeding may be done or use rotatory weeder for weeding. - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.
	Sowing of <i>Main Kharif</i> rice		- Use certified seeds for sowing. Rate: 60 kg/ ha. - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed. - Soak seeds for 24hrs then incubate before sowing. - Rice field may be prepared for nursery rising before 20-25 days of sowing.
<b>Maize</b>	<i>Kharif Maize</i> : vegetative		- Weeding may be done after rain by hand or apply Simazine @ 0.75 kg a.i./ ha. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
<b>Soybean / Groundnut</b>	Vegetative		- Earthing-up and thinning may be done after rain at 30 to 40 days after sowing of crop. - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.
<b>Blackgram</b>	Sowing to vegetative		- Weeding may be done after rains if the weed population is high. - Seed rate is 10-15 kg/ ha. Sowing may be done by broadcasting or dibbling. Treat the seed with Thiram or Captan @ 2 kg/seed.
<b>Rice bean</b>	Sowing to early vegetative		- Seed rate: 20 kg/ha. - Sow by dibbling (row to row spacing of 45cm).
<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.
<b>Horticulture Crops</b>			
<b>Cauliflower (Early)</b>	Land preparation to nursery sowing		- Prepare raised nursery bed with temporary rain shed and drain out excess water near bed area. Apply 1-2 kg FYM/ m <sup>2</sup> of nursery bed. Drench the soil with Captan 50 W.P. Till germination the cover bed with paddy straw.



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<b>Cucurbits</b>	Fruiting		- Avoid the fruits to touch soil by staking or with the support of dried twigs.
<b>Lime/ Lemon and papaya</b>	Transplanting		- After rains in fertile upland area, prepare pits of size 2x2x2 feet to transplant the seeded or grafted seedlings from a reliable source. Avoid water logging area or frost prone or area where high wind speed is experienced. Incorporate 10-12 kg of FYM and Trichoderma @ 20g/ pit with the top soil.
<b>Tree bean</b>	Transplanting		- Prepare the pit of size 3x3x3 feet in upland area after rains. - Incorporate the top soil with 7 kg FYM + 2-3g of Carbendazim per pit before planting. Transplant 1 ½ to 2 yrs old healthy seedling. - For pre-bearing plant (4-5 yrs old) apply 10g Urea + 40g DAP + 10g MOP per plant and spray Thiachlorpid 21.7% SC @ 1ml/ lit of water + Carbendazim @ 1g/ lit of water.

**Animal Sciences**

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		Coccidiosis	- As a preventive measure against coccidiosis, provide Supercox @ 1g/ lit of water.
		coli bacillosis ?	Add sanitizer in drinking water and avoid muddy water for drinking purpose.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.
		B.Q.	- Vaccinate against B.Q. @ 1ml sub- cutaneously.
<b>Pig</b>	Above 3 months of age (as and when required)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
		Protozoan Parasites	Give Sulpha drug/ Sulphadimidine @ 1g/kg b.wt. for 7 days.
		Endo/ Ecto parasite or skin infection	- Inject Neomac @ 1 ml/ 10 kg body weight.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.
		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.
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**Fishery:**

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