



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**3<sup>rd</sup> August, 2012**

**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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Senapati (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 30.0 - 31.0 °C. The minimum temp. is likely to be 19.0 – 21.0 °C. The maximum RH is likely to attain a max value of 99 %. Minimum RH is likely to reach a max of 94 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

**Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

**Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean</b>	Vegetative	- Hairy caterpillar	- Hand weeding should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.



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<b>Cucurbits</b> (sponge gourd, pumpkin, bitter gourd)	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Repair and provide support system or trellis.</li> <li>- If spread or trelled on the ground then use bedding material to avoid contact with soil.</li> <li>- In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide &amp; insecticide.</li> </ul>
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	<ul style="list-style-type: none"> <li>- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxychloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease.</li> <li>- Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.</li> </ul>
<b>Ginger</b>	Rhizome formation	Rhizome rot	<ul style="list-style-type: none"> <li>- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.</li> </ul>
<b>Passion fruit</b>			<ul style="list-style-type: none"> <li>- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective.</li> <li>- Collar rot can be controlled by spraying with copper fungicide or combination of Metalyxl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.</li> </ul>
<b>Citrus</b>			<ul style="list-style-type: none"> <li>- Spray Blitox @ 3 g/lit.</li> <li>- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.</li> </ul>
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	<ul style="list-style-type: none"> <li>- Deworm using Oxyclonazide @ 10-15 mg/ kg body weight.</li> <li>- Use Butox @ 2 ml/lit of water while brushing the animal.</li> </ul>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	<ul style="list-style-type: none"> <li>- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight.</li> <li>- Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).</li> <li>- Vaccinate against H.S. @ 2 ml sub-cutaneously.</li> </ul>
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	<ul style="list-style-type: none"> <li>- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only.</li> <li>- Vaccinate against Swine Fever after 3 months of age.</li> <li>- Vaccinate against FMD after 3 months of age.</li> </ul>
	All susceptible age groups	Ectoparasitic	<ul style="list-style-type: none"> <li>- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15<sup>th</sup> day.</li> <li>- Use Butox @ 2 ml/lit of water while brushing the animal.</li> </ul>
<b>Poultry</b>	All susceptible age groups	Endoparasite	<ul style="list-style-type: none"> <li>- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.</li> </ul>
		Coccidiosis	<ul style="list-style-type: none"> <li>- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.</li> </ul>
		Ranikhet	<ul style="list-style-type: none"> <li>- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7<sup>th</sup> day.</li> <li>- Give R<sub>2</sub>B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).</li> </ul>



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<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"> <li>Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the field.</li> <li>Water depth should be maintained at 1.0 m.</li> </ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"> <li>Pond should be free from unwanted vegetation and insects.</li> <li>Water depth should be maintained at 1.0-1.5m.</li> <li>During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li> <li>Oil emulsion process should be done before fish stocking</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>120-150g feed can be fed for 1 lakh spawn/day.</li> <li>Feed should be provided 2-3 times/day.</li> <li>Feeding should be given in fine powder form.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li> </ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"> <li>Pond should be free from unwanted vegetation and insects.</li> <li>Water depth should be maintained at 1.0-1.5m.</li> <li>During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>8,000 – 10,000 fingerlings of carps should be stocked in one hectare water area.</li> <li>Regular checking for growth and diseases (if any) should be done by netting.</li> </ul>

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**3<sup>rd</sup> August, 2012**

#### **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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Tamenglong (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 33.0 °C. The minimum temp. is likely to be 20.0 – 22.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 92 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

#### **Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

#### **Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuradan 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyriphos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxchloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliasis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.



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<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**3<sup>rd</sup> August, 2012**

**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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Ukhrul (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 30.0 - 32.0 °C. The minimum temp. is likely to be 21.0 – 23.0 °C. The maximum RH is likely to attain a max value of 99 %. Minimum RH is likely to reach a max of 97 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

**Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

**Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean</b>	Vegetative	- Hairy caterpillar	- Hand weeding should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.



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<b>Cucurbits</b> (sponge gourd, pumpkin, bitter gourd)	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Repair and provide support system or trellis.</li> <li>- If spread or trelled on the ground then use bedding material to avoid contact with soil.</li> <li>- In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide &amp; insecticide.</li> </ul>
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	<ul style="list-style-type: none"> <li>- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxychloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease.</li> <li>- Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.</li> </ul>
<b>Ginger</b>	Rhizome formation	Rhizome rot	<ul style="list-style-type: none"> <li>- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.</li> </ul>
<b>Passion fruit</b>			<ul style="list-style-type: none"> <li>- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective.</li> <li>- Collar rot can be controlled by spraying with copper fungicide or combination of Metalyxl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.</li> </ul>
<b>Citrus</b>			<ul style="list-style-type: none"> <li>- Spray Blitox @ 3 g/lit.</li> <li>- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.</li> </ul>
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	<ul style="list-style-type: none"> <li>- Deworm using Oxyclozide @ 10-15 mg/ kg body weight.</li> <li>- Use Butox @ 2 ml/lit of water while brushing the animal.</li> </ul>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	<ul style="list-style-type: none"> <li>- Deworm against Fascioliosis using Oxyclozide @ 15 mg/ kg body weight.</li> <li>- Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).</li> <li>- Vaccinate against H.S. @ 2 ml sub-cutaneously.</li> </ul>
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	<ul style="list-style-type: none"> <li>- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only.</li> <li>- Vaccinate against Swine Fever after 3 months of age.</li> <li>- Vaccinate against FMD after 3 months of age.</li> </ul>
	All susceptible age groups	Ectoparasitic	<ul style="list-style-type: none"> <li>- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15<sup>th</sup> day.</li> <li>- Use Butox @ 2 ml/lit of water while brushing the animal.</li> </ul>
<b>Poultry</b>	All susceptible age groups	Endoparasite	<ul style="list-style-type: none"> <li>- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.</li> </ul>
		Coccidiosis	<ul style="list-style-type: none"> <li>- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.</li> </ul>
		Ranikhet	<ul style="list-style-type: none"> <li>- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7<sup>th</sup> day.</li> <li>- Give R<sub>2</sub>B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).</li> </ul>





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<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"> <li>Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the field.</li> <li>Water depth should be maintained at 1.0 m.</li> </ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"> <li>Pond should be free from unwanted vegetation and insects.</li> <li>Water depth should be maintained at 1.0-1.5m.</li> <li>During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li> <li>Oil emulsion process should be done before fish stocking</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>120-150g feed can be fed for 1 lakh spawn/day.</li> <li>Feed should be provided 2-3 times/day.</li> <li>Feeding should be given in fine powder form.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li> </ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"> <li>Pond should be free from unwanted vegetation and insects.</li> <li>Water depth should be maintained at 1.0-1.5m.</li> <li>During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>8,000 – 10,000 fingerlings of carps should be stocked in one hectare water area.</li> <li>Regular checking for growth and diseases (if any) should be done by netting.</li> </ul>

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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



## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**3<sup>rd</sup> August, 2012**

#### **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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Bishnupur (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 30.0 °C. The minimum temp. is likely to be 19.0 – 21.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 95 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

#### **Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

#### **Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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**Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxchloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliosis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.



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**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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



## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**3<sup>rd</sup> August, 2012**

#### **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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Chandel (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 26.0 - 32.0 °C. The minimum temp. is likely to be 22.0 – 23.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 98 %. The average wind speed during next five days may reach upto max. value of 6 km/hr.

#### **Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

#### **Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxichloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliosis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.





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**Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**3<sup>rd</sup> August, 2012**

**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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u></p> <p>During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 31.0 - 32.0 °C. The minimum temp. is likely to be 20.0 – 22.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 92 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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**Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

**Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxchloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliasis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.



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



**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**3<sup>rd</sup> August, 2012**

**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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Imphal- East (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 30.0 °C. The minimum temp. is likely to be 18.0 – 20.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 98 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

**Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

**Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxychloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozanide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliasis using Oxyclozanide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.





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<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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**Manipur Centre, Lamphelpat, Imphal - 795 004**



## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**3<sup>rd</sup> August, 2012**

#### **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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u>	<u>Weather forecast for next five days of Imphal- West (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.	During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 30.0 - 31.0 °C. The minimum temp. is likely to be 19.0 – 21.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 95 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.

#### **Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

#### **Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraniliprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuran 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyrifos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxchloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliasis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.



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



**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**3<sup>rd</sup> August, 2012**

**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 4<sup>th</sup> to 8<sup>th</sup> August, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (31<sup>st</sup> July to 2<sup>nd</sup> August, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 24.6 mm rainfall was recorded during past three days. Maximum temperature range observed was 27.8 – 33.4 °C, range of minimum temperature observed was 21.1 – 22.2 °C, mean relative humidity observed in morning and afternoon were 91.67 % and 74.33 % respectively. The average wind speed range was 2.2 – 3.2 km/hr.</p>	<p><u>Weather forecast for next five days of Thoubal (4<sup>th</sup> to 8<sup>th</sup> August, 2012)</u></p> <p>During next five days, there is likely to have light rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 29.0 - 30.0 °C. The minimum temp. is likely to be 19.0 – 21.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 98 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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**Major Feature of Weather Forecast up to 0830 hours IST of 6<sup>th</sup> July, 2012**

Rain/thundershowers would occur at many places over northeastern states

**Weather Outlook for subsequent 4 days up to 0830 hours IST of 10<sup>th</sup> August, 2012**

Rain/ thunder shower activity would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Sowing of late variety of rice		- Sowing of late variety RC Maniphou 7 may be started with the rains.
	Transplanting to early vegetative		- Maintain 10-15 cm of water level. - Provide good drainage system to maintain the required amount of water in the field.
		Stem borer	- For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml in 500lit of water/ha or @ 1 ml/ 12 lit of water.
<b>Kharif maize</b>	Vegetative to silking	Shoot borer	- Weeding should be done in row spacing. - Apply 1-2 granules of Carbofuradan 3G for shoot borer at the shoot whorl.
<b>Soybean/ Groundnut</b>	Vegetative	- Hairy caterpillar - Tikka disease	- Hand weeding should be done. - Earthing up should be done. - If incidence of hairy caterpillar is observed, then spray Quinalphos 25 EC or Chloropyriphos 20 EC @ 2 ml/ lit of water. - Carbendazim @ 0.5g / lit of water may be sprayed to control Tikka disease.
<b>Blackgram</b>	Land preparation		Land preparation for sowing black gram may be done.
<b>Storage</b>			- To prevent the infestation of stored grains, attack of rodents and mould growth proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.



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



**“Integrated Agromet Advisory Services”**

<b>Horticulture Crops</b>			
<b>Pea</b>	Sowing		Sowing of field pea at the foothills, both on terrace and across the slope, slightly colder area, where paddy can't be grown.
<b>Rice bean</b>	Sowing		Sowing of local variety of rice bean in upland area or across the slope may be done.
<b>Tomato</b>	Nursery / transplanting		- Raise tomato in polyhouse/ temporary shed/ portable shed.
<b>Cucurbits (sponge gourd, pumpkin, bitter gourd)</b>	Fruiting to harvesting		- Repair and provide support system or trellis. - If spread or trelled on the ground then use bedding material to avoid contact with soil. - In cucurbits that are at fruiting to harvesting stage, farmers should not take up spray of chemical fungicide & insecticide.
<b>Cauliflower</b>	Nursery		- Preparation for nursery may be done preferably in rain sheltered fertile area. Sow mid season varieties.
<b>Turmeric + French Bean</b>	Rhizome formation in turmeric	Rhizome rot	- Alternate spray of Dithane M-45 @ 2.5 gm and Copper Oxchloride @ 3 g/ lit of water may be done at 10-15 days interval to prevent rhizome rot disease. - Use bio-degradable mulches (properly dried twigs, paddy straw, etc.) in between turmeric plant in upland area.
<b>Ginger</b>	Rhizome formation	Rhizome rot	- Spray Mencozeb @ 2.5 g/ lit of water to minimize the incidence of soft rot.
<b>Passion fruit</b>			- Spray Carbaryl 0.1% or Malathion 0.05% or keeping fruit fly traps can control the fruit fly. Poison baiting with jaggery + fruit juice+ malathion (20:20:1) @ 40-50 baits/ha is also effective. - Collar rot can be controlled by spraying with copper fungicide or combination of Metalaxyl + Mancozeb @ 2.5 g/lit of water or soil drenching with 1% Bordeaux mixture. Spray.
<b>Citrus</b>			- Spray Blitox @ 3 g/lit. - Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Cattle / Buffalo</b>	All susceptible age groups	Fascioliosis Skin infection	- Deworm using Oxyclozide @ 10-15 mg/ kg body weight. - Use Butox @ 2 ml/lit of water while brushing the animal.
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite  Haemorrhagic Septicemia	- Deworm against Fascioliasis using Oxyclozide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose). - Vaccinate against H.S. @ 2 ml sub-cutaneously.
<b>Pig</b>	Above 3 months of age	Endoparasitic  Swine Fever FMD	- De-worm using Piperazine liquid @ 3-6 ml/10 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age. - Vaccinate against FMD after 3 months of age.
	All susceptible age groups	Ectoparasitic	- Advocate tab. Ivermectin/Ivermectol @ 3mg/ kg body weight and repeat the dose on 15 <sup>th</sup> day. - Use Butox @ 2 ml/lit of water while brushing the animal.





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



**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Albendazole @ 35 ml for 100 birds in drinking water once and repeat it after 7 days.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7 <sup>th</sup> day. - Give R <sub>2</sub> B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
<b>Fisheries</b>			
<b>Type of Fish</b>	<b>Stage</b>	<b>Management</b>	<b>Ago-metrological advisories</b>
Paddy cum fish culture		Field	<ul style="list-style-type: none"><li>• Preparation of trenches of 1.0 m depth and 1.0-2.0 m width can be made at the boundary or middle part of the feild.</li><li>• Water depth should be maintained at 1.0 m.</li></ul>
Carps	Nurseries	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li><li>• Oil emulsion process should be done before fish stocking</li></ul>
		Feed	<ul style="list-style-type: none"><li>• 120-150g feed can fed for 1 lakh spawn/day.</li><li>• Feed should be provided 2-3 times/day.</li><li>• Feeding should be given in fine powder form.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 1.0 -10 million spawn/ha can be stocked in one hectare nurseries pond depending on water quality and availability of natural feed in the pond.</li></ul>
	Grow out fish	Pond and water	<ul style="list-style-type: none"><li>• Pond should be free from unwanted vegetation and insects.</li><li>• Water depth should be maintained at 1.0-1.5m.</li><li>• During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.</li></ul>
		Feed	<ul style="list-style-type: none"><li>• Well balanced feed fortified with vitamins and minerals should be provided as supplementary feed two-three times a day @ 3-5% body weight per day.</li></ul>
		Fish	<ul style="list-style-type: none"><li>• 8,000 – 10,000 fingerlings of carps should be stocked I one hectare water area.</li><li>• Regular checking for growth and diseases (if any) should be done by netting.</li></ul>

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