



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)

During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. **79.1 mm** rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.

Weather forecast for next five days of Churachandpur (25<sup>th</sup> to 29<sup>th</sup> June, 2014)

There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 30.0 – 32.0 °C & minimum temp. 21.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 70 % (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 low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.<br>- Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.  |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.<br>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.<br>- Soak seeds for 24hrs then incubate before sowing.<br>- 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 by hand or apply Simazine @ 0.75 kg a.i./ ha.<br>- Earthing up and thinning to single plant may be done.<br>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.  |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.<br>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing. |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | -Weeding may be done if the weed population is high.<br>- 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.<br>- 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.   |



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| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>-Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.   |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)

During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. **79.1 mm** rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.

Weather forecast for next five days of Imphal-East (25<sup>th</sup> to 29<sup>th</sup> June, 2014)

There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 34.0 °C & minimum temp. 22.0 – 24.0 °C. Relative Humidity may reach a maximum of 100 % (maximum RH) & 76 % (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 low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.   |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.  |
| <b>Maize</b>                              | <i>Kharif Maize:</i> vegetative                      |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.  |
|   |  |                              | - Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.   |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Soak seeds for 24hrs then incubate before sowing.   |
|   |  |                              | - Rice field may be prepared for nursery rising before 20-25 days of sowing.  |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | - Weeding may be done by hand or apply Simazine @ 0.75 kg a.i./ ha.   |
|   |  |                              | - Earthing up and thinning to single plant may be done.   |
| <b>Rice bean</b>                          | Sowing to early vegetative                           |                              | - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.   |
|   |  |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done. |
| <b>Storage</b>                            |  |                              | - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.   |
|   |  |                              | - Weeding may be done if the weed population is high.   |
| <b>Storage</b>                            |  |                              | - 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.  |
|   |  |                              | - Seed rate: 20 kg/ha.  |
| <b>Storage</b>                            |  |                              | - Sow by dibbling (row to row spacing of 45cm).   |
|   |  |                              | - 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.  |



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| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>- Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.  |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
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| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- Give antibiotic like Sulpha drug @ 30-40 ml/ 100 birds.  |
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|  |   | 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.  |
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|  |   | 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.   |
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| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.  |
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| <p><u>Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)</u></p>   | <p><u>Weather forecast for next five days of Imphal-West (25<sup>th</sup> to 29<sup>th</sup> June, 2014)</u></p>   |
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| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
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| <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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**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

|   |   |
|---|---|
| <p><u>Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)</u></p>   | <p><u>Weather forecast for next five days of Senapati (25<sup>th</sup> to 29<sup>th</sup> June, 2014)</u></p>   |
| <p>During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. <b>79.1 mm</b> rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.</p> | <p>There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 29.0 – 31.0 °C &amp; minimum temp. 20.0 – 22.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) &amp; 76 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.</p> |

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | <ul style="list-style-type: none"> <li>- Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.</li> <li>- Apply Chloropyrifos 20EC @ 1.3 lit in 500-700 lit of water per hectare.</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 by hand or apply Simazine @ 0.75 kg a.i./ ha.</li> <li>- Earthing up and thinning to single plant may be done.</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>- Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.</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 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>   |



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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>- Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.  |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

|   |  |
|---|--|
| <p><u>Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)</u></p>   | <p><u>Weather forecast for next five days of Tamenglong (25<sup>th</sup> to 29<sup>th</sup> June, 2014)</u></p>  |
| <p>During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. <b>79.1 mm</b> rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.</p> | <p>There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 34.0 °C &amp; minimum temp. 22.0 – 24.0 °C. Relative Humidity may reach a maximum of 100 % (maximum RH) &amp; 70 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.</p> |

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.<br>- Apply Chloropyrifos 20EC @ 1.3 lit in 500-700 lit of water per hectare.   |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.<br>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.<br>- Soak seeds for 24hrs then incubate before sowing.<br>- 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 by hand or apply Simazine @ 0.75 kg a.i./ ha.<br>- Earthing up and thinning to single plant may be done.<br>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.  |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.<br>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing. |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | -Weeding may be done if the weed population is high.<br>- 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.<br>- 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.   |



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**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>-Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.   |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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.  |



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

|   |   |
|---|---|
| <p><u>Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)</u></p>   | <p><u>Weather forecast for next five days of Thoubal (25<sup>th</sup> to 29<sup>th</sup> June, 2014)</u></p>  |
| <p>During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. <b>79.1 mm</b> rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.</p> | <p>There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 30.0 – 33.0 °C &amp; minimum temp. 22.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) &amp; 78 % (minimum RH). The average wind speed may be 2-6 km/hr during next five days.</p> |

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | <ul style="list-style-type: none"> <li>- Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.</li> <li>- Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.</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 by hand or apply Simazine @ 0.75 kg a.i./ ha.</li> <li>- Earthing up and thinning to single plant may be done.</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>- Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.</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 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>   |



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



**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>- Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.  |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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.  |



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)

During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. **79.1 mm** rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.

Weather forecast for next five days of Ukhrul (25<sup>th</sup> to 29<sup>th</sup> June, 2014)

There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 18.0 – 21.0 °C. Relative Humidity may reach a maximum of 98 % (maximum RH) & 80 % (minimum RH). The average wind speed may be 3-5 km/hr during next five days.

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.<br>- Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.  |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.<br>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.<br>- Soak seeds for 24hrs then incubate before sowing.<br>- 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 by hand or apply Simazine @ 0.75 kg a.i./ ha.<br>- Earthing up and thinning to single plant may be done.<br>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.  |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.<br>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing. |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | -Weeding may be done if the weed population is high.<br>- 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.<br>- 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.   |



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**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>- Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.  |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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.  |



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)

During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. **79.1 mm** rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.

Weather forecast for next five days of Bishnupur (25<sup>th</sup> to 29<sup>th</sup> June, 2014)

There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 30.0 – 33.0 °C & minimum temp. 21.0 – 23.0 °C. Relative Humidity may reach a maximum of 99 % (maximum RH) & 72 % (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 low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.<br>- Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.  |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.<br>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.<br>- Soak seeds for 24hrs then incubate before sowing.<br>- 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 by hand or apply Simazine @ 0.75 kg a.i./ ha.<br>- Earthing up and thinning to single plant may be done.<br>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.  |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.<br>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing. |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | -Weeding may be done if the weed population is high.<br>- 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.<br>- 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.   |



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**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>              |                                    |  | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>           | Fruiting to harvesting             |  | - Avoid water logging near crop.<br>-Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.   |
| <b>Vegetables</b>          |                                    |  | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |

| <b>Animal Sciences</b>          |   |                                       |  |
|---------------------------------|---|---------------------------------------|--|
| <b>Name of the animal</b>       | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>  |
| <b>Poultry</b>                  | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.   |

| <b>Fishery:</b>  |           |                |  |
|--|-----------|----------------|--|
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |           |                |  |
| <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.<br>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.   |



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**24<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 25<sup>th</sup> to 29<sup>th</sup> June, 14 as given below:

|   |   |
|---|---|
| <p><u>Significant past weather for the preceding bi-weekly of Imphal - West (20<sup>th</sup> to 23<sup>rd</sup> June, 2014)</u></p>   | <p><u>Weather forecast for next five days of Chandel (25<sup>th</sup> to 29<sup>th</sup> June, 2014)</u></p>  |
| <p>During past four days sky was mainly cloudy to cloudy but partly cloudy during morning hours of 21<sup>st</sup> June. <b>79.1 mm</b> rainfall was recorded during past four days. Maximum temperature range observed was 25.7 – 29.5 °C, range of minimum temperature observed was 22.0 – 22.9 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 88.5 % respectively. The average wind speed range was 0.5 – 0.8 km/hr.</p> | <p>There may be light rain upto Sunday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 34.0 °C &amp; minimum temp. 22.0 – 24.0 °C. Relative Humidity may reach a maximum of 98 % (maximum RH) &amp; 81 % (minimum RH). The average wind speed may be 4-6 km/hr during next five days.</p> |

**Main Weather Observations**

**Kalpana-1:** Cloud imagery of 0530 hours IST shows low/ medium clouds over northeast India

**Weather warnings upto 26<sup>th</sup> June, 2014**

Heavy rainfall would occur at isolated places over Manipur

**Weather Outlook for subsequent 4 days from 27<sup>th</sup> June to 1<sup>st</sup> July, 2014**

Rain/thundershowers would occur at most of the 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>                               | Grain filling stage to maturity in early kharif rice | Plant hopper                 | - Maintain water level at 5-8 cm. Drain/ pump out excess water from the crop field.<br>- Apply Chloropyriphos 20EC @ 1.3 lit in 500-700 lit of water per hectare.  |
|   | Sowing of <i>Main Kharif</i> rice                    |                              | - Use certified seeds for sowing. Rate: 60 kg/ ha.<br>- Treat seeds with Tricyclazole 75WP or Carbendazim @ 2g/ kg of seed.<br>- Soak seeds for 24hrs then incubate before sowing.<br>- 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 by hand or apply Simazine @ 0.75 kg a.i./ ha.<br>- Earthing up and thinning to single plant may be done.<br>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.  |
| <b>Soybean / Groundnut</b>                | Vegetative   |                              | - Hand weeding should be done before 30-35 days after sowing or Fluchloralin 45EC may be applied @ 0.75 kg/ha as pre-planting soil incorporation for effective control of weeds in soybean and groundnut. Also, earthing-up and thinning may be done.<br>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing. |
| <b>Blackgram</b>                          | Sowing to vegetative                                 |                              | -Weeding may be done if the weed population is high.<br>- 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.<br>- 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.   |



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**“Integrated Agromet Advisory Services”**

| <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.   |
| <b>Citrus</b>  |   |                                       | - Spray Ridomil (2.5 g/lit) + Monocrotophos (1 ml/lit) to avoid the attack of insect pest and disease.  |
| <b>Cucurbits</b>   | Fruiting to harvesting                            |                                       | - Avoid water logging near crop.<br>-Provide bedding material (dried twigs, leaves, polythene sheet) to pumpkin, bottle gourd fruits for crops trilling on the ground to avoid contact with soil.   |
| <b>Vegetables</b>  |   |                                       | Spray Bayleton @ 7 gm/ 10 lit of water as a prophylactic measure against powdery Mildew when there seems the probability to have 4-5 hrs of no rain.<br>Also spray Sixer (Carbendazime(12%) + Mencozeb (63%)) @ 2 gm / litre of water to protect from any fungal disease when there seems the probability to have 4-5 hrs of no rain. |
| <b>Animal Sciences</b>   |   |                                       |   |
| <b>Name of the animal</b>  | <b>Growth stage</b>                               | <b>Disease/ infestation</b>           | <b>Agro-meteorological advisories</b>   |
| <b>Poultry</b>   | All susceptible age groups (as and when required) | Endoparasites                         | - De-worm using Piperazine citrate.<br>- 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.  |
| <b>Fishery:</b>  |   |                                       |   |
| <b>- Encircle pond with net to avoid escape of fish during rainy days.</b> |   |                                       |   |
| <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.<br>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.  |