



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Senapati (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain fair to mainly cloudy, with maximum temp. of 28.0-30.0 °C & minimum temp. 16.0-18.0 °C. Relative humidity may reach upto 96 % (max RH) & 41 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South west Westerly to North west Westerly during the next five days. |
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**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | - Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.<br>- Transplanting may be done upto mid of April.<br>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | - Urea may be applied @ 66kg/ ha during inter-culture operation.<br>- Thinning may be done. Maintain single plant per hill.  |
|   |   | Stem borer       | - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | - Land preparation for sowing of soybean/ groundnut/ blackgram may be started.<br>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | -The seed rhizome should be screened from pest and diseases<br>-Spread in the shed for 1-2 days<br>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed & keep for ½ hour and sowing may be done.<br>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm<br>- Desirable weight of rhizome-15-25 gm with 2-3buds.<br>-Mulching with dried twigs/paddy straw is recommended. |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | -Land preparation for both the crop may be started.  |
| <b>Tomato</b>   | Fruit borer                             |                  | -Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.  |
| <b>Water melon</b>  |   |                  | -In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended  |
| <b>Allium odorosum</b>  |   |                  | -Plantation of <i>Allium odorosum</i> (Maroi nakuppi).<br>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".<br>-Coriander seed may also be sown in between the Allium Species as an intercrop.   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | -Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.<br>-Procure quality planting material   |
|   |   |                  | -Land preparation for plantation of Ginger/turmeric may be started.<br>-Upland areas are more suitable for the crop.<br>-Ginger rhizome seeds affected by rhizome rot should be discarded.   |
| <b>Animal Sciences</b>  |   |                  |  |



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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Tamenglong (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain fair to mainly cloudy, with maximum temp. of 29.0-30.0 °C & minimum temp. 17.0-19.0 °C. Relative humidity may reach upto 99 % (max RH) & 56 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be Southerly to South west Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | - Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.<br>- Transplanting may be done upto mid of April.<br>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | - Urea may be applied @ 66kg/ ha during inter-culture operation.<br>- Thinning may be done. Maintain single plant per hill.  |
|   |   | Stem borer       | - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | - Land preparation for sowing of soybean/ groundnut/ blackgram may be started.<br>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | -The seed rhizome should be screened from pest and diseases<br>-Spread in the shed for 1-2 days<br>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed & keep for ½ hour and sowing may be done.<br>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm<br>- Desirable weight of rhizome-15-25 gm with 2-3buds.<br>-Mulching with dried twigs/paddy straw is recommended. |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | -Land preparation for both the crop may be started.  |
| <b>Tomato</b>   | Fruit borer                             |                  | -Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.  |
| <b>Water melon</b>  |   |                  | -In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended  |
| <b>Allium odorosum</b>  |   |                  | -Plantation of <i>Allium odorosum</i> (Maroi nakuppi).<br>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".<br>-Coriander seed may also be sown in between the Allium Species as an intercrop.   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | -Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.<br>-Procure quality planting material   |
|   |   |                  | -Land preparation for plantation of Ginger/turmeric may be started.<br>-Upland areas are more suitable for the crop.<br>-Ginger rhizome seeds affected by rhizome rot should be discarded.   |
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| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Thoubal (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain fair to mainly cloudy, with maximum temp. of 29.0-31.0 °C & minimum temp. 16.0-19.0 °C. Relative humidity may reach upto 98 % (max RH) & 37 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be Westerly to North west Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | - Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.<br>- Transplanting may be done upto mid of April.<br>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | - Urea may be applied @ 66kg/ ha during inter-culture operation.<br>- Thinning may be done. Maintain single plant per hill.  |
|   |   | Stem borer       | - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | - Land preparation for sowing of soybean/ groundnut/ blackgram may be started.<br>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | -The seed rhizome should be screened from pest and diseases<br>-Spread in the shed for 1-2 days<br>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed & keep for ½ hour and sowing may be done.<br>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm<br>- Desirable weight of rhizome-15-25 gm with 2-3buds.<br>-Mulching with dried twigs/paddy straw is recommended. |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | -Land preparation for both the crop may be started.  |
| <b>Tomato</b>   | Fruit borer                             |                  | -Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.  |
| <b>Water melon</b>  |   |                  | -In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended  |
| <b>Allium odorosum</b>  |   |                  | -Plantation of <i>Allium odorosum</i> (Maroi nakuppi).<br>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".<br>-Coriander seed may also be sown in between the Allium Species as an intercrop.   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | -Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.<br>-Procure quality planting material   |
|   |   |                  | -Land preparation for plantation of Ginger/turmeric may be started.<br>-Upland areas are more suitable for the crop.<br>-Ginger rhizome seeds affected by rhizome rot should be discarded.   |
| <b>Animal Sciences</b>  |   |                  |  |





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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
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|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
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|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Ukhrul (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain fair to mainly cloudy, with maximum temp. of 29.0-31.0 °C & minimum temp. 17.0-19.0 °C. Relative humidity may reach upto 89 % (max RH) & 36 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South west Westerly to North west Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |



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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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





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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Bishnupur (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain variable sky to mainly cloudy, with maximum temp. of 25.0-27.0 °C & minimum temp. 17.0-19.0 °C. Relative humidity may reach upto 98 % (max RH) & 44 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Westerly to South west Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 - 13 t/ha or 2.5 - 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |



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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Chandel (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain variable sky to mainly cloudy, with maximum temp. of 27.0-30.0 °C & minimum temp. 16.0-17.0 °C. Relative humidity may reach upto 91 % (max RH) & 32 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South south Westerly to North west Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |



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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |  |
|--|--|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Churachandpur (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain fair to mainly cloudy, with maximum temp. of 29.0-31.0 °C & minimum temp. 18.0-19.0 °C. Relative humidity may reach upto 98 % (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be Southerly to South Westerly during the next five days. |
|--|--|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |





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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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**ICAR Research Complex for N.E.H. Region  
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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)**

The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr.

**Weather forecast for next five days of Imphal East (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)**

Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain variable sky to mainly cloudy, with maximum temp. of 28.0-29.0 °C & minimum temp. 19.0-20.0 °C. Relative humidity may reach upto 99 % (max RH) & 44 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South west Westerly to North west Westerly during the next five days.

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |



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



**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**22<sup>nd</sup> April, 2016**

**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 23<sup>rd</sup> to 27<sup>th</sup> April, 2016 as below:

|  |   |
|--|---|
| <b>Significant past weather for the preceding bi-weekly of Imphal - West (19<sup>th</sup> to 21<sup>st</sup> April, 2016)</b><br>The sky was variable sky to overcast. Rainfall of 9.0 mm was recorded during past three days. Maximum temperature range observed was 25.6 - 29.1 °C, range of minimum temperature observed was 18.1 - 20.0 °C, mean relative humidity observed in morning and afternoon were 82.7 % and 69.3 % respectively. The average wind speed range was 4.1 to 7.0 km/hr. | <b>Weather forecast for next five days of Imphal West (23<sup>rd</sup> to 27<sup>th</sup> April, 2016)</b><br>Likely to have light to moderate rain with thunderstorm during the next five days. Sky will remain variable sky to mainly cloudy, with maximum temp. of 28.0-29.0 °C & minimum temp. 17.0-19.0 °C. Relative humidity may reach upto 99 % (max RH) & 52 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South Westerly to Westerly during the next five days. |
|--|---|

**Weather Outlook for subsequent 2 days from 26<sup>th</sup> to 28<sup>th</sup> April, 2016**

Rain/thunderstorm likely at many places over northeastern states

**Weather Warning during next 5 days**

Thunderstorm and heavy rain likely at isolated places over Manipur on 22<sup>nd</sup> April, 2016

Heavy rain very likely at isolated places over Manipur on 23<sup>rd</sup> April, 2016

| Name of the crop  | Stage                                   | Pest and disease | Agro-meteorological advisories   |
|---|---|------------------|--|
| <b>Field Crops</b>  |   |                  |  |
| <b>Early kharif rice</b>                                      | Main field preparation to transplanting |                  | <ul style="list-style-type: none"> <li>- Row planting of 2-3 seedlings per hill at 25x10 cm using beaded rope may be done.</li> <li>- Transplanting may be done upto mid of April.</li> <li>- To enhance the establishment of transplanted seedlings, water depth of 2-3cm should be maintained in the field after transplanting then it may be increased gradually.</li> </ul>  |
| <b>Rabi Maize</b>   | Vegetative                              |                  | <ul style="list-style-type: none"> <li>- Urea may be applied @ 66kg/ ha during inter-culture operation.</li> <li>- Thinning may be done. Maintain single plant per hill.</li> </ul>  |
|   |   | Stem borer       | <ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>  |
| <b>Soybean/ Groundnut/ Blackgram</b>                          | Land preparation                        |                  | <ul style="list-style-type: none"> <li>- Land preparation for sowing of soybean/ groundnut/ blackgram may be started.</li> <li>- Apply 10 – 13 t/ha or 2.5 – 3 t/sangam of FYM or compost by mixing thoroughly in the soil 1 - 2 weeks before sowing.</li> </ul>   |
| <b>Horticulture Crops</b>                                     |   |                  |  |
| <b>Ginger/Turmeric</b>  | Preparation for sowing                  |                  | <ul style="list-style-type: none"> <li>-The seed rhizome should be screened from pest and diseases</li> <li>-Spread in the shed for 1-2 days</li> <li>-treat rhizome with Captan 50 W P or Hexaconazeb @ 3gm/kg seed &amp; keep for ½ hour and sowing may be done.</li> <li>-Spacing for Ginger -20cm X 30cm; turmeric- 20 cm X 45-50cm</li> <li>- Desirable weight of rhizome-15-25 gm with 2-3buds.</li> <li>-Mulching with dried twigs/paddy straw is recommended.</li> </ul> |
| <b>Bhindi/cowpea</b>  | Land preparation                        |                  | <ul style="list-style-type: none"> <li>-Land preparation for both the crop may be started.</li> </ul>  |
| <b>Tomato</b>   | Fruit borer                             |                  | <ul style="list-style-type: none"> <li>-Prophylactic measure to protect from Early blight of Tomato is recommended. D. M-45 (Mencozeb) @ 2gm/l may be sprayed.</li> </ul>  |
| <b>Water melon</b>  |   |                  | <ul style="list-style-type: none"> <li>-In early stage the beds and ridges should be free from weeds. In the later stage the vine will automatically cover the space in between the plants. Hence, weeding cum top dressing is recommended</li> </ul>  |
| <b>Allium odorosum</b>  |   |                  | <ul style="list-style-type: none"> <li>-Plantation of <i>Allium odorosum</i> (Maroi nakuppi).</li> <li>-High density planting (1-0-12 nos. of rhizome) per hill is recommended for high yield at a spacing of 6" X 6".</li> <li>-Coriander seed may also be sown in between the Allium Species as an intercrop.</li> </ul>   |
| <b>Fruit plants (Banana, Lime, Lemon, Orange, Kiwi, etc.)</b> | Procurement of planting material        |                  | <ul style="list-style-type: none"> <li>-Jungle cutting and preparation of pit for planting/transplanting of these fruit plants should be started. Pit preparation should be done atleast 1 month ahead of planting.</li> <li>-Procure quality planting material</li> </ul>   |
|   |   |                  | <ul style="list-style-type: none"> <li>-Land preparation for plantation of Ginger/turmeric may be started.</li> <li>-Upland areas are more suitable for the crop.</li> <li>-Ginger rhizome seeds affected by rhizome rot should be discarded.</li> </ul>   |
| <b>Animal Sciences</b>  |   |                  |  |



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**“Gramin Krishi Mausam Seva”**

| Name of the animal                           | Growth stage                          | Disease/ infestation                | Agro-meteorological advisories  |
|--|---------------------------------------|-------------------------------------|---|
| <b>Poultry</b><br>(Chicken/<br>Turkey/ Duck) | All age groups                        | Care & management                   | - To protect from dehydration, provision for wholesome and clear water (cool) be maintained properly atleast four times during the day.   |
|  |                                       | Ranikhet Diseases                   | Birds must be vaccinated as per recommended schedule mentioned below as the probability of occurrence of the disease is high during March- April months.<br>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.<br>2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers).<br>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).<br>After that at every two months interval. |
| <b>Sheep/ Goat</b>                           | All age groups excepts the young ones |                                     |   |
|  |                                       | Ectoparasitism                      | - Pepirazine compound- 100mg/kg orally for 3 days.<br>- Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
| <b>Pig</b>                                   | All age groups excepts the young ones | Deworming                           | -Give Morantel citrate tablet @ 15 mg/kg of body weight.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Hog Cholera                         | -Vaccination against swine fever must be carried out.   |
| <b>Cattle</b>                                | All age groups excepts the young ones | B.Q./ H.S/FMD                       | -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.  |
|  |                                       | Ectoparasitism                      | - Keep the sheds clean. Hang Bouquets of Basil (Ocimum sanctum) or Lemon Grass (Cymbopogon citrates) in the animals sheds to keep away the ecto-parasites. Neem oil based disinfectants can be sprayed. Butox solution (2 C.C. in 1 litre of water) can also be used.   |
|  |                                       | Johnes disease & Sterility          | Immediate proper treatment for the disease should be provided.  |
|  |                                       | Fodder crops                        | -Maize should be sown for use as green fodder.<br>-Napier/Guinea grass may be transplanted.<br>-Silage can be prepared.   |
|  |                                       | Puerperal Fever in Pregnant animals | -50-60 gram of mineral mixture every day.   |
|  |                                       | Decrease in milk production         | -The milk & urine samples must be sent for testing.   |
|  | Breedable age group                   | Controlled breeding                 | -control breeding programme for animals should continue in the month of February so the all participating animals become pregnant during this month.  |
|  | Milch cow                             | Mastitis                            | -To prevent mastitis they should be milked completely.  |
| <b>Fishery:</b>                              |                                       |                                     |   |
| Type of Farming                              | Stage                                 | Management                          | Agro-metrological advisories  |
| <b>Carp culture</b>                          | Fries/<br>fingerlings/<br>brooders    | Pond and water                      | -Maintain minimum depth of 1.5 – 2.0 m by filling fresh and clean water.<br>-Apply Agri-Lime in brooder pond at small quantity at an interval of 30 days regularly.   |
|  |                                       | Feed                                | Provide feed 1-2 times @ 2 % body weight per day.   |
|  |                                       | Fish                                | - Male and female brooders should be stock in separate ponds for early breeding programs for Common Carp.<br>- Harvesting of fish may be done in area where water availability is low.  |

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