

# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"





## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# **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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

## Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Bishnupur (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 33 - 34 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 99 % (max RH) & 89 % (min RH). The average wind speed may be 2-4 km/hr.

#### Field Crops

| r                        |  |  |   |
|--------------------------|--|--|---|
| Name of the crop         | Stage  | Pest and disease                                       | Agro-meteorological advisories  |
| Rice                     | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect            | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/ 15 litres of water.</li> </ul> |
|                          |  | Case worm, borer,<br>leaf folder, thrips<br>Stem borer | <ul> <li>- Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).</li> <li>- For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.</li> </ul>  |
| Maize                    | Vegetative cob<br>formation                    |  | <ul> <li>Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.</li> </ul>  |
| Soybean /<br>Groundnut   | Vegetative                                     | hairy caterpillars                                     | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>  |
| Blackgram &<br>Rice bean | Vegetative                                     | hairy caterpillars                                     | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>   |
| Seeds storage            | Post harvest<br>management                     |  | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>  |
| Horticulture Crops       | -  |  |   |
| Name of the crop         | Stage  | Pest and disease                                       | Agro-meteorological advisories  |
| Ginger                   | Vegetative to                                  |  | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |

| Name of the crop       | Stage                                | Pest and disease   | Agro-meteorological advisories   |
|------------------------|--------------------------------------|--------------------|--|
| Ginger                 | Vegetative to                        |                    | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/  |
|                        | rhizome formation                    |                    | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|                        |                                      |                    | interval for 2-3 times.  |
| Turmeric               | Vegetative                           | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|                        |                                      | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                        |                                      |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| <b>Cauliflower and</b> | Nursery of mid                       |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato                 | season variety                       |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                        |                                      |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower            | Transplanting to<br>early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |

# "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-----------------|------------------|---------------------|---|
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |
| Animal Sciences |                  | - L                 |   |

| NI                                    | <u>C</u> 4                                  | birds and animals.       |   |
|---------------------------------------|---|--------------------------|---|
| Name of bird/<br>animal               | Stage                                       | Disease and Management   | Agro-meteorological advisories  |
|                                       | All age groups                              | Fowl Pox                 | Vaccinate against fowl pox.   |
| Doultry                               |   | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| Poultry<br>(Chicken/<br>Turkey/ Duck) |   | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.   |
|                                       |   |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> </ul>   |
|                                       |   |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.  |
| Sheep/ Goat                           | All age groups                              | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|                                       | All age groups<br>except the<br>young ones  | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig                                   |   | Vaccination              | - Vaccinate against FMD.  |
| 112                                   |   | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>   |
|                                       | All age groups<br>excepts the<br>young ones | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
| Cattle                                |   | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.   |
|                                       |   | Slush & Flood Management | <ul> <li>Provide clean and wholesome water. Keep animals in safe place.</li> <li>Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.</li> </ul> |
|                                       |   | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.<br>Provide good feed having 30% crude protein fortified with vitamins and mineral.  |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.<br>- Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | - Sampling of fish for growth, disease should be done regularly by netting.<br>Same as grow out fish farming management.  |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | l after the water level rea      | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"



## 4<sup>th</sup> August, 2017

### MANIPUR BULLETIN

# <u>Chandel</u>

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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

# Significant past weather for the preceding bi-weekly of ImphalWe- West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)(5<sup>th</sup>)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Chandel (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 30 - 32 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 99 % (max RH) & 91 % (min RH). The average wind speed may be 2-4 km/hr.

E-mail: agromet\_mnp@yahoo.co.uk

#### Field Crops

| probability of no full f | of at least unce nours. |                       |   |
|--------------------------|-------------------------|-----------------------|---|
| Name of the crop         | Stage                   | Pest and disease      | Agro-meteorological advisories  |
|                          | Transplanting to        |                       | - If seedlings are available, complete transplanting before 15 <sup>th</sup> August. To have more tillers, avoid excess water in the field.   |
|                          | tillering               |                       | - Maintain a thin film of water upto 7 days after transplanting. Then raise water   |
|                          | (kharif rice)           |                       | level upto 5-8cm.   |
|                          |                         |                       | - In upland area, hand weeding may be done. Off-type plants must be removed.  |
|                          |                         |                       | Then top dressing may be done.  |
| Rice                     |                         |                       | - Drain out the water and apply 33kg of urea as top dress after 30days of   |
|                          |                         |                       | transplanting. Drain in water after 48hrs of top-dressing.  |
|                          |                         | Bacterial leaf blight | - Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).   |
|                          |                         | Any sucking insect    | - Imidachloprid @ 8ml/ 15 litres of water.  |
|                          |                         | Case worm, borer,     | - Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water   |
|                          |                         | leaf folder, thrips   | (at least three pumps per sangam).  |
|                          |                         | Stem borer            | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                    | Vegetative cob          |                       | - Weeding may be done to avoid insect pest in the crop field and also avoid   |
|                          | formation               |                       | water logging in the crop field.  |
| Soybean /                | Vegetative              |                       | - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.   |
| Groundnut                |                         | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control   |
|                          |                         |                       | it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).   |
|                          |                         |                       | - Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.  |
| Blackgram &              | Vegetative              |                       | - Avoid sowing in water logged fields. Also, avoid hairy caterpillars during  |
| Rice bean                |                         | 1 - :                 | vegetative stage.   |
|                          |                         | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water). |
|                          | Post harvest            |                       | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper</li> </ul>                                       |
|                          | management              |                       | drying of seeds along with charcoal at 80:20. Check for moisture content or   |
| Seeds storage            | management              |                       | weight of charcoal and dry if required.   |
| Secus storage            |                         |                       | - For grains, store grains in well ventilated godowns after drying proper. Spray  |
|                          |                         |                       | Malathion 1% on the walls of stores.  |
| Horticulture Crops       |                         |                       |   |
| Name of the crop         | Stage                   | Pest and disease      | Agro-meteorological advisories  |
| Ginger                   | Vegetative to           |                       | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/   |
|                          | rhizome formation       |                       | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days  |
|                          |                         |                       | interval for 2-3 times.   |
|                          | <b>X</b> 7 •            | T CC / 11 C           |   |

|                 |                  |                    | interval for 2-3 times.  |
|-----------------|------------------|--------------------|--|
| Turmeric        | Vegetative       | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against |
|                 |                  | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.                         |
|                 |                  |                    | - Drain out excess water to avoid water logging to avoid soft rot.               |
| Cauliflower and | Nursery of mid   |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising            |
| Tomato          | season variety   |                    | nursery. Protect nursery from damping off. Fumigate the soil with                |
|                 |                  |                    | formaldehyde drench the soil with Captan 50WP.                                   |
| Cauliflower     | Transplanting to |                    | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ |
|                 | early vegetative | Plutella Diamond   | White Shot/ White treasure) at a spacing of 45cm x 45cm.                         |

## "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-----------------|------------------|---------------------|---|
|                 |                  |                     |   |
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |
| Animal Sciences | ii.              | -1                  |   |

| * Provide clean of the second seco | drinking water for            | birds and animals.       |   |
|---|-------------------------------|--------------------------|---|
| Name of bird/<br>animal   | Stage                         | Disease and Management   | Agro-meteorological advisories  |
|   | All age groups                | Fowl Pox                 | Vaccinate against fowl pox.   |
| Doultur   |                               | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| Poultry<br>(Chicken/<br>Turkey/ Duck)   |                               | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks. |
| Turkey/ Duck)   |                               |                          | - Bleaching powder may be spread near farm premises.  |
|   |                               |                          | - Avoid fungal infested feed.   |
|   |                               |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.                                      |
| Sheep/ Goat   | All age groups                | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|   |                               | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig   | All age groups<br>except the  | Vaccination              | - Vaccinate against FMD.  |
|   | young ones                    | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>         |
|   | All age groups<br>excepts the | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
|   |                               | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100   |
| ~   | young ones                    |                          | kg body weight.   |
| Cattle  |                               | Slush & Flood Management | - Provide clean and wholesome water. Keep animals in safe place.  |
|   |                               |                          | Avoid grazing at the periphery of flood. Animals should be protected against  |
|   |                               |                          | illness caused due to damp weather. Mineral mixtures/vitamins should be fed at  |
|   |                               |                          | this time. Do not allow to drink flood water.   |
|   |                               | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.   |
|                            |                          |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.   |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.  |
|                            |                          |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
|                            |                          |                                  | - Sampling of fish for growth, disease should be done regularly by netting.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | Same as grow out fish farming management.   |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | l after the water level rea      | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"



## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# **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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West $(1^{st} to 3^{rd} August, 2017)$

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Churachandpur  $(5^{th} \ to \ 9^{th} \ August, \ 2017)$ 

E-mail: agromet\_mnp@yahoo.co.uk

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 32 - 33 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 99 % (max RH) & 90 % (min RH). The average wind speed may be 0-4 km/hr.

#### Field Crops

| Free merity of the familie | ~  |   |   |
|----------------------------|--|---|---|
| Name of the crop           | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Rice                       | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect<br>Case worm, borer,<br>leaf folder, thrips | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/ 15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).</li> </ul> |
|                            |  | Stem borer  | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                      | Vegetative cob<br>formation                    |   | - Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.  |
| Soybean /<br>Groundnut     | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>  |
| Blackgram &<br>Rice bean   | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>   |
| Seeds storage              | Post harvest<br>management                     |   | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>  |
| Horticulture Crops         |  |   |   |
| Name of the crop           | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Ginger                     | Vegetative to rhizome formation                |   | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |

| Name of the crop | Blage                                | i est anu uisease  | Agro-ineccorological advisories  |
|------------------|--------------------------------------|--------------------|--|
| Ginger           | Vegetative to                        |                    | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/  |
|                  | rhizome formation                    |                    | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|                  |                                      |                    | interval for 2-3 times.  |
| Turmeric         | Vegetative                           | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|                  |                                      | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                  |                                      |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| Cauliflower and  | Nursery of mid                       |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato           | season variety                       |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                  |                                      |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower      | Transplanting to<br>early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |
|                  |                                      |                    |  |

# "Gramin Krishi Mausam Seva"

|                         | (early varie       | ty) black moth        | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-------------------------|--------------------|-----------------------|---|
| King Chilli             | Fruiting           | Fruit rot and aphid   | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion                   | Sowing/ pl         | anting                | - This is the season for sowing of onion in the upland areas.   |
| Banana                  | For old orc        | hard                  | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |
| Animal Scienc           | es                 |                       |   |
| * Provide clean         | drinking water for | birds and animals.    |   |
| Name of bird/<br>animal | Stage              | Disease and Managemen | t Agro-meteorological advisories  |
|                         | All age groups     | Fowl Pox              | Vaccinate against fowl pox.   |
|                         |                    | Coccidiosis           | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |

| Poultry  |                        | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
|--|------------------------|--------------------------|---|
| (Chicken/                                      |                        | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.   |
| Turkey/ Duck)                                  |                        |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> <li>Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft<sup>2</sup> area.</li> </ul>   |
| Sheep/ Goat                                    | All age groups         | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|  |                        | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig All age groups<br>except the<br>young ones | All age groups         | Vaccination              | - Vaccinate against FMD.  |
|  | 1                      | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>   |
|  | All age groups         | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
|  | excepts the young ones | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.   |
| Cattle   |                        | Slush & Flood Management | - Provide clean and wholesome water. Keep animals in safe place.<br>Avoid grazing at the periphery of flood. Animals should be protected against<br>illness caused due to damp weather. Mineral mixtures/vitamins should be fed at<br>this time. Do not allow to drink flood water. |
|  |                        | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |
| Fishem   |                        | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| C L                        |                     | Management                       | Agro-metrological advisories   |
|----------------------------|---------------------|----------------------------------|--|
| Carp culture               | Nurseries/ grow-out | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain. |
|                            |                     | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.  |
|                            |                     |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.  |
|                            |                     | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.                                       |
|                            |                     |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder   |
|                            |                     |                                  | and 30% bottom feeder.   |
|                            |                     |                                  | - Sampling of fish for growth, disease should be done regularly by netting.  |
| Integrated Fish<br>Farming | Fish                | Same as grow out fish management | Same as grow out fish farming management.  |
|                            | Pig                 |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one  |
|                            |                     |                                  | ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal   |
|                            |                     |                                  | folder is also provided. Grass with interlocked soil in the root system (sod) is   |
|                            |                     |                                  | provided once a week to avoid mineral deficiency.  |
|                            | Duck                |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha  |
|                            |                     |                                  | pond.  |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"





## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

## <u>Senapati</u>

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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

# Significant past weather for the preceding bi-weekly of ImphalWeath- West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)(5<sup>th</sup> to 9)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Senapati (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 33 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 97 % (max RH) & 85 % (min RH). The average wind speed may be 2 km/hr.

#### Field Crops

| Name of the crop   | Stage                      | Pest and disease      | Agro-meteorological advisories  |
|--------------------|----------------------------|-----------------------|---|
|                    | Transplanting to tillering |                       | - If seedlings are available, complete transplanting before 15 <sup>th</sup> August. To have more tillers, avoid excess water in the field. |
|                    | 0                          |                       | - Maintain a thin film of water upto 7 days after transplanting. Then raise water   |
|                    | (kharif rice)              |                       | level upto 5-8cm.   |
|                    |                            |                       | - In upland area, hand weeding may be done. Off-type plants must be removed.<br>Then top dressing may be done.                              |
| Dies               |                            |                       | - Drain out the water and apply 33kg of urea as top dress after 30days of   |
| Rice               |                            |                       | transplanting. Drain in water after 48hrs of top-dressing.  |
|                    |                            | Bacterial leaf blight | - Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).   |
|                    |                            | Any sucking insect    | - Imidachloprid @ 8ml/ 15 litres of water.  |
|                    |                            | Case worm, borer,     | - Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water   |
|                    |                            | leaf folder, thrips   | (at least three pumps per sangam).  |
|                    |                            | Stem borer            | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize              | Vegetative cob             |                       | - Weeding may be done to avoid insect pest in the crop field and also avoid   |
|                    | formation                  |                       | water logging in the crop field.  |
| Soybean /          | Vegetative                 |                       | - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.   |
| Groundnut          |                            | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control   |
|                    |                            |                       | it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).   |
|                    |                            | -                     | - Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.  |
| Blackgram &        | Vegetative                 |                       | - Avoid sowing in water logged fields. Also, avoid hairy caterpillars during  |
| Rice bean          |                            |                       | vegetative stage.   |
|                    |                            | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control   |
|                    | Post harvest               |                       | it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).   |
|                    |                            |                       | - For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper   |
| Sooda storego      | management                 |                       | drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.                         |
| Seeds storage      |                            |                       | - For grains, store grains in well ventilated godowns after drying proper. Spray  |
|                    |                            |                       | Malathion 1% on the walls of stores.  |
| Horticulture Crops |                            | <u> </u>              | Financial 170 of the wind of Stores.  |
| Name of the crop   | Stage                      | Pest and disease      | Agro-meteorological advisories  |
| Ginger             | Vegetative to              |                       | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/   |
| - 8                | rhizome formation          |                       | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days  |
|                    |                            |                       |   |

| Vegetative to rhizome formation      |   | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|--------------------------------------|---|---|
|                                      |   | interval for 2-3 times.   |
| Vegetative                           | Leaf Spot and leaf  | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against  |
|                                      | blotch  | Leaf spot and Leaf blotch at 7 days interval after rain.  |
|                                      |   | - Drain out excess water to avoid water logging to avoid soft rot.  |
| Nursery of mid                       |   | - Use temporary rain shelter facility/ low cost polyhouse for raising   |
| season variety                       |   | nursery. Protect nursery from damping off. Fumigate the soil with   |
|                                      |   | formaldehyde drench the soil with Captan 50WP.  |
| Transplanting to<br>early vegetative | Plutella Diamond  | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm.  |
|                                      | rhizome formation<br>Vegetative<br>Nursery of mid<br>season variety<br>Transplanting to | rhizome formation       Vegetative     Leaf Spot and leaf blotch       Nursery of mid season variety     Image: Comparison of the season variety       Transplanting to     Image: Comparison of the season variety |

## "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-----------------|------------------|---------------------|---|
|                 |                  |                     |   |
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |
| Animal Sciences | ii.              | -1                  |   |

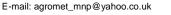
| * Provide clean of the second seco | drinking water for                         | birds and animals.       |   |
|---|--|--------------------------|---|
| Name of bird/<br>animal   | Stage                                      | Disease and Management   | Agro-meteorological advisories  |
|   | All age groups                             | Fowl Pox                 | Vaccinate against fowl pox.   |
| Doultur   |  | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| Poultry<br>(Chicken/<br>Turkey/ Duck)   |  | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks. |
| Turkey/ Duck)   |  |                          | - Bleaching powder may be spread near farm premises.  |
|   |  |                          | - Avoid fungal infested feed.   |
|   |  |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.                                      |
| Sheep/ Goat   | All age groups                             | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|   | All age groups<br>except the<br>young ones | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig   |  | Vaccination              | - Vaccinate against FMD.  |
| rıg   |  | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>         |
|   | All age groups<br>excepts the              | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
|   |  | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100   |
| ~   | young ones                                 |                          | kg body weight.   |
| Cattle  |  | Slush & Flood Management | - Provide clean and wholesome water. Keep animals in safe place.  |
|   |  |                          | Avoid grazing at the periphery of flood. Animals should be protected against  |
|   |  |                          | illness caused due to damp weather. Mineral mixtures/vitamins should be fed at  |
|   |  |                          | this time. Do not allow to drink flood water.   |
|   |  | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.   |
|                            |                          |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.   |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.  |
|                            |                          |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
|                            |                          |                                  | - Sampling of fish for growth, disease should be done regularly by netting.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | Same as grow out fish farming management.   |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | l after the water level rea      | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"





## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# **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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

### Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Tamenglong  $(5^{th} \text{ to } 9^{th} \text{ August}, 2017)$ 

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 30 - 31 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 99 % (max RH) & 81 % (min RH). The average wind speed may be 2 km/hr.

#### Field Crops

| productine, or no runn i | of at least anee notatol                       |   |   |
|--------------------------|--|---|---|
| Name of the crop         | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Rice                     | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect<br>Case worm, borer,<br>leaf folder, thrips | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/15 lit of water or Lambdacyhothrin @ 15ml/15 litre of water (at least three pumps per sangam).</li> </ul> |
|                          |  | Stem borer  | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                    | Vegetative cob<br>formation                    |   | - Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.  |
| Soybean /<br>Groundnut   | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>  |
| Blackgram &<br>Rice bean | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>   |
| Seeds storage            | Post harvest<br>management                     |   | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>  |
| Horticulture Crops       |  |   |   |
| Name of the crop         | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Ginger                   | Vegetative to rhizome formation                |   | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |

| Name of the crop       | Stage                                | Pest and disease   | Agro-meteorological advisories   |
|------------------------|--------------------------------------|--------------------|--|
| Ginger                 | Vegetative to                        |                    | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/  |
|                        | rhizome formation                    |                    | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|                        |                                      |                    | interval for 2-3 times.  |
| Turmeric               | Vegetative                           | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|                        |                                      | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                        |                                      |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| <b>Cauliflower and</b> | Nursery of mid                       |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato                 | season variety                       |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                        |                                      |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower            | Transplanting to<br>early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |

# "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-----------------|------------------|---------------------|---|
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |
| Animal Sciences |                  | - L                 |   |

| NI                         | <u>C</u> 4                                  | birds and animals.       |   |
|----------------------------|---|--------------------------|---|
| Name of bird/<br>animal    | Stage                                       | Disease and Management   | Agro-meteorological advisories  |
|                            | All age groups                              | Fowl Pox                 | Vaccinate against fowl pox.   |
| Poultry                    |   | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| (Chicken/<br>Turkey/ Duck) |   | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.   |
| Turkey/ Duck)              |   |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> </ul>   |
|                            |   |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.  |
| Sheep/ Goat                | All age groups                              | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|                            | All age groups<br>except the<br>young ones  | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig                        |   | Vaccination              | - Vaccinate against FMD.  |
| rıg                        |   | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>   |
|                            | All age groups<br>excepts the<br>young ones | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
| Cattle                     |   | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.   |
|                            |   | Slush & Flood Management | <ul> <li>Provide clean and wholesome water. Keep animals in safe place.</li> <li>Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.</li> </ul> |
|                            |   | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.<br>Provide good feed having 30% crude protein fortified with vitamins and mineral.  |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.<br>- Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | - Sampling of fish for growth, disease should be done regularly by netting.<br>Same as grow out fish farming management.  |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | l after the water level rea      | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"





## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# <u>Thoubal</u>

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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

### Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Thoubal (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 32 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 99 % (max RH) & 93 % (min RH). The average wind speed may be 2-4 km/hr.

#### Field Crops

| r                        |  |  |   |
|--------------------------|--|--|---|
| Name of the crop         | Stage  | Pest and disease   | Agro-meteorological advisories  |
| Rice                     | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect<br>Case worm, borer,<br>leaf folder thring | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/15 lit of water or Lambdacyhothrin @ 15ml/15 litre of water (at least three pumps per sangam) for the same pumps per sangam.</li> </ul> |
|                          |  | leaf folder, thrips<br>Stem borer  | (at least three pumps per sangam) For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                    | Vegetative cob<br>formation                    |  | - Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.  |
| Soybean /<br>Groundnut   | Vegetative                                     | hairy caterpillars   | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>  |
| Blackgram &<br>Rice bean | Vegetative                                     | hairy caterpillars   | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>   |
| Seeds storage            | Post harvest<br>management                     |  | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>  |
| Horticulture Crops       |  | -  | 1   |
| Name of the crop         | Stage  | Pest and disease   | Agro-meteorological advisories  |
| Ginger                   | Vegetative to rhizome formation                |  | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |

| Name of the crop       | Stage                                | Pest and disease   | Agro-meteorological advisories   |
|------------------------|--------------------------------------|--------------------|--|
| Ginger                 | Vegetative to                        |                    | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/  |
|                        | rhizome formation                    |                    | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|                        |                                      |                    | interval for 2-3 times.  |
| Turmeric               | Vegetative                           | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|                        |                                      | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                        |                                      |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| <b>Cauliflower and</b> | Nursery of mid                       |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato                 | season variety                       |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                        |                                      |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower            | Transplanting to<br>early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |

## "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |  |  |
|-----------------|------------------|---------------------|---|--|--|
|                 |                  |                     |   |  |  |
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |  |  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |  |  |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |  |  |
| Animal Sciences |                  |                     |   |  |  |

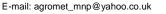
| * Provide clean of the second seco | drinking water for                         | birds and animals.       |   |
|---|--|--------------------------|---|
| Name of bird/<br>animal   | Stage                                      | Disease and Management   | Agro-meteorological advisories  |
|   | All age groups                             | Fowl Pox                 | Vaccinate against fowl pox.   |
| Doultur   |  | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| Poultry<br>(Chicken/<br>Turkey/ Duck)   |  | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks. |
| Turkey/ Duck)   |  |                          | - Bleaching powder may be spread near farm premises.  |
|   |  |                          | - Avoid fungal infested feed.   |
|   |  |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.                                      |
| Sheep/ Goat   | All age groups                             | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|   | All age groups<br>except the<br>young ones | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig   |  | Vaccination              | - Vaccinate against FMD.  |
| rıg   |  | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>         |
|   | All age groups<br>excepts the              | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
|   |  | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100   |
| ~   | young ones                                 |                          | kg body weight.   |
| Cattle  |  | Slush & Flood Management | - Provide clean and wholesome water. Keep animals in safe place.  |
|   |  |                          | Avoid grazing at the periphery of flood. Animals should be protected against  |
|   |  |                          | illness caused due to damp weather. Mineral mixtures/vitamins should be fed at  |
|   |  |                          | this time. Do not allow to drink flood water.   |
|   |  | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.   |
|                            |                          |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.   |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.  |
|                            |                          |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
|                            |                          |                                  | - Sampling of fish for growth, disease should be done regularly by netting.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | Same as grow out fish farming management.   |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | l after the water level rea      | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"





## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# <u>Ukhrul</u>

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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

# Significant past weather for the preceding bi-weekly of Imphal<br/>- West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)Weath<br/>(5<sup>th</sup> to

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

# Weather forecast for next five days of Ukhrul (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 31 - 33 ° C & minimum temp. 24 - 25 ° C. Relative humidity may reach up to 98 % (max RH) & 86 % (min RH). The average wind speed may be 2-3 km/hr.

#### Field Crops

| probability of no fam f  |  |  |  |
|--------------------------|--|--|--|
| Name of the crop         | Stage  | Pest and disease   | Agro-meteorological advisories   |
| Rice                     | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect<br>Case worm, borer, | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/ 15 litres of water.</li> <li>Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water</li> </ul> |
|                          |  | leaf folder, thrips<br>Stem borer                                | <ul><li>(at least three pumps per sangam).</li><li>For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.</li></ul>  |
| Maize                    | Vegetative cob<br>formation                    | Stelli bolei   | <ul> <li>For stein borer, spray Chlorantrainipior 25.5% @ 40 mi/na.</li> <li>Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.</li> </ul>   |
| Soybean /<br>Groundnut   | Vegetative                                     | hairy caterpillars   | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>   |
| Blackgram &<br>Rice bean | Vegetative                                     | hairy caterpillars   | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>  |
| Seeds storage            | Post harvest<br>management                     |  | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>   |
| Horticulture Crops       | 1  | _L   |  |
| Name of the crop         | Stage  | Pest and disease   | Agro-meteorological advisories   |
| Ginger                   | Vegetative to                                  |  | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/  |

| · · · · · · · · · · · · · · · · · · · |                   |                    |  |
|---------------------------------------|-------------------|--------------------|--|
| Name of the crop                      | Stage             | Pest and disease   | Agro-meteorological advisories   |
| Ginger                                | Vegetative to     |                    | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/      |
|                                       | rhizome formation |                    | lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days     |
|                                       |                   |                    | interval for 2-3 times.  |
| Turmeric                              | Vegetative        | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against |
|                                       |                   | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.                         |
|                                       |                   |                    | - Drain out excess water to avoid water logging to avoid soft rot.               |
| Cauliflower and                       | Nursery of mid    |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising            |
| Tomato                                | season variety    |                    | nursery. Protect nursery from damping off. Fumigate the soil with                |
|                                       |                   |                    | formaldehyde drench the soil with Captan 50WP.                                   |
| Cauliflower                           | Transplanting to  |                    | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/ |
|                                       | early vegetative  | Plutella Diamond   | White Shot/ White treasure) at a spacing of 45cm x 45cm.                         |

# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"



|                 | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |  |
|-----------------|------------------|---------------------|---|--|
| King Chilli     | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |  |
| Onion           | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |  |
| Banana          | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |  |
| Animal Sciences |                  |                     |   |  |

|                            |   | birds and animals.       |   |
|----------------------------|---|--------------------------|---|
| Name of bird/<br>animal    | Stage                                       | Disease and Management   | Agro-meteorological advisories  |
|                            | All age groups                              | Fowl Pox                 | Vaccinate against fowl pox.   |
| Poultry                    |   | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.  |
| (Chicken/<br>Turkey/ Duck) |   | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.   |
| Turkey Duck)               |   |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> </ul>   |
|                            |   |                          | - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 $ft^2$ area.  |
| Sheep/ Goat                | All age groups                              | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.   |
|                            | All age groups<br>except the<br>young ones  | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.   |
| Pig                        |   | Vaccination              | - Vaccinate against FMD.  |
| rig                        |   | Management               | <ul> <li>Provide adequate amount of wholesome water (drinking).</li> <li>Essential body salts may be provided.</li> </ul>   |
|                            | All age groups<br>excepts the<br>young ones | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.   |
| Cattle                     |   | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.   |
|                            |   | Slush & Flood Management | <ul> <li>Provide clean and wholesome water. Keep animals in safe place.</li> <li>Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed at this time. Do not allow to drink flood water.</li> </ul> |
|                            |   | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.  |

Fishery:

| Type of<br>Farming         | Stage                    | Management                  | Agro-metrological advisories   |
|----------------------------|--------------------------|-----------------------------|--|
| Carp culture               | Nurseries/ grow-out      | Pond and water              | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain. |
|                            |                          | Feed                        | Provide feed 2-3 times @ 5-10% body weight per day.  |
|                            |                          |                             | Provide good feed having 30% crude protein fortified with vitamins and mineral.  |
|                            |                          | Fish                        | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one   |
|                            |                          |                             | hectare pond.  |
|                            |                          |                             | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder   |
|                            |                          |                             | and 30% bottom feeder.   |
|                            |                          |                             | - Sampling of fish for growth, disease should be done regularly by netting.  |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish       | Same as grow out fish farming management.  |
|                            |                          | management                  |  |
|                            | Pig                      |                             | About 30-40 two months old pigs may be kept for proper fertilization of the one  |
|                            | 0                        |                             | ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal   |
|                            |                          |                             | folder is also provided. Grass with interlocked soil in the root system (sod) is   |
|                            |                          |                             | provided once a week to avoid mineral deficiency.  |
|                            | Duck                     |                             | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha  |
|                            |                          |                             | pond.  |
| Apply Agri lime            | in the fish culture pond | l after the water level rea | aches normal depth after flood @ 30-35 kg /ha at 30days interval.  |



ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"



## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# 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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

# Significant past weather for the preceding bi-weekly of ImphalWeather- West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)(5<sup>th</sup> to

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Imphal East  $(5^{th} \text{ to } 9^{th} \text{ August, } 2017)$ 

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 32 - 33 ° C & minimum temp. 22 - 23 ° C. Relative humidity may reach up to 98 % (max RH) & 89 % (min RH). The average wind speed may be 2 km/hr.

E-mail: agromet\_mnp@yahoo.co.uk

#### Field Crops

| probability of no full 1 | of at least three nours.        |                       |   |
|--------------------------|---------------------------------|-----------------------|---|
| Name of the crop         | Stage                           | Pest and disease      | Agro-meteorological advisories  |
|                          | Transplanting to tillering      |                       | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water</li> </ul> |
|                          | (kharif rice)                   |                       | level upto 5-8cm.   |
|                          | (Kharn nee)                     |                       | - In upland area, hand weeding may be done. Off-type plants must be removed.  |
|                          |                                 |                       | Then top dressing may be done.  |
| Rice                     |                                 |                       | - Drain out the water and apply 33kg of urea as top dress after 30days of   |
| MICC                     |                                 |                       | transplanting. Drain in water after 48hrs of top-dressing.  |
|                          |                                 | Bacterial leaf blight | - Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).   |
|                          |                                 | Any sucking insect    | - Imidachloprid @ 8ml/ 15 litres of water.  |
|                          |                                 | Case worm, borer,     | - Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water   |
|                          |                                 | leaf folder, thrips   | (at least three pumps per sangam).  |
|                          |                                 | Stem borer            | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                    | Vegetative cob                  |                       | - Weeding may be done to avoid insect pest in the crop field and also avoid   |
|                          | formation                       |                       | water logging in the crop field.  |
| Soybean /                | Vegetative                      |                       | - Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.   |
| Groundnut                |                                 | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).   |
|                          |                                 |                       | - Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.  |
| Blackgram &<br>Rice bean | Vegetative                      |                       | - Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.  |
|                          |                                 | hairy caterpillars    | - For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).   |
|                          | Post harvest                    |                       | - For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper   |
|                          | management                      |                       | drying of seeds along with charcoal at 80:20. Check for moisture content or   |
| Seeds storage            | C C                             |                       | weight of charcoal and dry if required.   |
| U                        |                                 |                       | - For grains, store grains in well ventilated godowns after drying proper. Spray  |
|                          |                                 |                       | Malathion 1% on the walls of stores.  |
| Horticulture Crops       |                                 |                       |   |
| Name of the crop         | Stage                           | Pest and disease      | Agro-meteorological advisories  |
| Ginger                   | Vegetative to rhizome formation |                       | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days   |
|                          |                                 |                       | interval for 2-3 times.   |
| Turmeric                 | Vegetative                      | Leaf Spot and leaf    | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against  |

| Turmeric               | Vegetative                           | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|------------------------|--------------------------------------|--------------------|--|
|                        |                                      | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                        |                                      |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| <b>Cauliflower and</b> | Nursery of mid                       |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato                 | season variety                       |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                        |                                      |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower            | Transplanting to<br>early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |

## "Gramin Krishi Mausam Seva"



|             | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-------------|------------------|---------------------|---|
|             |                  |                     |   |
| King Chilli | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion       | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana      | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |

|                            |   |                          | must be eut at a neight of 0.0m of 2 ft. Maintain only 5 plants per pit.   |
|----------------------------|---|--------------------------|--|
| Animal Science             | 'S  |                          |  |
| * Provide clean d          | lrinking water for                          | birds and animals.       |  |
| Name of bird/<br>animal    | Stage                                       | Disease and Management   | Agro-meteorological advisories   |
|                            | All age groups                              | Fowl Pox                 | Vaccinate against fowl pox.  |
| Poultry                    |   | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.   |
| (Chicken/<br>Turkey/ Duck) |   | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.  |
| Turkey, Duck)              |   |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> <li>Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft<sup>2</sup> area.</li> </ul>  |
| Sheep/ Goat                | All age groups                              | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.  |
| -                          | All age groups except the                   | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.  |
| Pig exce                   |   | Vaccination              | - Vaccinate against FMD.   |
|                            | young ones                                  | Management               | <ul><li>Provide adequate amount of wholesome water (drinking).</li><li>Essential body salts may be provided.</li></ul>   |
|                            | All age groups<br>excepts the<br>young ones | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.  |
| exce                       |   | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.  |
|                            |   | Slush & Flood Management | <ul> <li>Provide clean and wholesome water. Keep animals in safe place.</li> <li>Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed a this time. Do not allow to drink flood water.</li> </ul> |
|                            |   | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.   |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
|----------------------------|--------------------------|----------------------------------|---|
| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.   |
|                            |                          |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.   |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.  |
|                            |                          |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
|                            |                          |                                  | - Sampling of fish for growth, disease should be done regularly by netting.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | Same as grow out fish farming management.   |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | after the water level rea        | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |



ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004 "Gramin Krishi Mausam Seva"



## MANIPUR BULLETIN

# 4<sup>th</sup> August, 2017

# 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 5<sup>th</sup> to 9<sup>th</sup> August, 2017 as below:

### Significant past weather for the preceding bi-weekly of Imphal - West (1<sup>st</sup> to 3<sup>rd</sup> August, 2017)

Observed to mainly cloudy to overcast sky but partly cloudy during afternoon hours of  $3^{rd}$  August. **No** rainfall was recorded during past three days. Maximum temperature range of 29.2 to 31.8 ° C and minimum temperature range of 23.6 to 24.2 ° C with mean relative humidity 88.3 % max and 69.7 % min was recorded in the past three days.

Weather forecast for next five days of Imphal West (5<sup>th</sup> to 9<sup>th</sup> August, 2017)

Likely to have heavy to very heavy rains at isolated places upto Wednesday with mainly cloudy to overcast sky and maximum temp. 30 - 32 ° C & minimum temp. 22 - 23 ° C. Relative humidity may reach up to 99 % (max RH) & 84 % (min RH). The average wind speed may be 2 km/hr.

#### Field Crops

| probability of no fall f | of at least three nours.                       |   |   |
|--------------------------|--|---|---|
| Name of the crop         | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Rice                     | Transplanting to<br>tillering<br>(kharif rice) | Bacterial leaf blight<br>Any sucking insect<br>Case worm, borer,<br>leaf folder, thrips | <ul> <li>If seedlings are available, complete transplanting before 15<sup>th</sup> August. To have more tillers, avoid excess water in the field.</li> <li>Maintain a thin film of water upto 7 days after transplanting. Then raise water level upto 5-8cm.</li> <li>In upland area, hand weeding may be done. Off-type plants must be removed. Then top dressing may be done.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Streptocycline @ 2g/15 litres of water (at least three pumps per sangam).</li> <li>Imidachloprid @ 8ml/ 15 litres of water.</li> <li>Coragen @3ml/15 lit of water or Lambdacyhothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).</li> </ul> |
|                          |  | Stem borer  | - For stem borer, spray Chlorantraliniprol 23.5% @ 40 ml/ha.  |
| Maize                    | Vegetative cob<br>formation                    |   | - Weeding may be done to avoid insect pest in the crop field and also avoid water logging in the crop field.  |
| Soybean /<br>Groundnut   | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> <li>Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.</li> </ul>  |
| Blackgram &<br>Rice bean | Vegetative                                     | hairy caterpillars  | <ul> <li>Avoid sowing in water logged fields. Also, avoid hairy caterpillars during vegetative stage.</li> <li>For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).</li> </ul>   |
| Seeds storage            | Post harvest<br>management                     |   | <ul> <li>For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>  |
| Horticulture Crops       |  |   |   |
| Name of the crop         | Stage  | Pest and disease  | Agro-meteorological advisories  |
| Ginger                   | Vegetative to<br>rhizome formation             |   | Water soaked lesions and rhizome rot disease spray Redomil MZ72 W.P. @ 2 g/<br>lit of water alternately with Dithane M-45 @ 2.5 gm/ lit of water at 15 days<br>interval for 2-3 times.  |
| Turmorio                 | Vegetative                                     | Leaf Spot and leaf  | - Repeat spraying of DM-45 $@$ 2.0 g/lit of water as prophylactic measure against   |

| Turmeric        | Vegetative                        | Leaf Spot and leaf | - Repeat spraying of DM-45 @ 2.0 g/ lit of water as prophylactic measure against   |
|-----------------|-----------------------------------|--------------------|--|
|                 |                                   | blotch             | Leaf spot and Leaf blotch at 7 days interval after rain.   |
|                 |                                   |                    | - Drain out excess water to avoid water logging to avoid soft rot.   |
| Cauliflower and | Nursery of mid                    |                    | - Use temporary rain shelter facility/ low cost polyhouse for raising  |
| Tomato          | season variety                    |                    | nursery. Protect nursery from damping off. Fumigate the soil with  |
|                 |                                   |                    | formaldehyde drench the soil with Captan 50WP.   |
| Cauliflower     | Transplanting to early vegetative | Plutella Diamond   | - Transplant healthy seedlings of early cauliflower (variety like Early Himlata/<br>White Shot/ White treasure) at a spacing of 45cm x 45cm. |

## "Gramin Krishi Mausam Seva"



|             | (early variety)  | black moth          | - Check for infestation of Plutella Diamond black moth in young plants.   |
|-------------|------------------|---------------------|---|
|             |                  |                     |   |
| King Chilli | Fruiting         | Fruit rot and aphid | - Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.  |
| Onion       | Sowing/ planting |                     | - This is the season for sowing of onion in the upland areas.   |
| Banana      | For old orchard  |                     | - Remove unwanted suckers. After 30-35 days of harvesting fruits, mother plant must be cut at a height of 0.6m or 2 ft. Maintain only 3 plants per pit. |

|                            |   |                          | must be eut at a neight of 0.0m of 2 ft. Maintain only 5 plants per pit.   |
|----------------------------|---|--------------------------|--|
| Animal Science             | 'S  |                          |  |
| * Provide clean d          | lrinking water for                          | birds and animals.       |  |
| Name of bird/<br>animal    | Stage                                       | Disease and Management   | Agro-meteorological advisories   |
|                            | All age groups                              | Fowl Pox                 | Vaccinate against fowl pox.  |
| Poultry                    |   | Coccidiosis              | - Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.   |
| (Chicken/<br>Turkey/ Duck) |   | Deworming                | - Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.  |
| Turkey, Duck)              |   |                          | <ul> <li>Bleaching powder may be spread near farm premises.</li> <li>Avoid fungal infested feed.</li> <li>Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft<sup>2</sup> area.</li> </ul>  |
| Sheep/ Goat                | All age groups                              | Vaccination              | - Sheep should be vaccinated against B.Q./ H.S.  |
| -                          | All age groups except the                   | De-worming               | - De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.  |
| Pig exce                   |   | Vaccination              | - Vaccinate against FMD.   |
|                            | young ones                                  | Management               | <ul><li>Provide adequate amount of wholesome water (drinking).</li><li>Essential body salts may be provided.</li></ul>   |
|                            | All age groups<br>excepts the<br>young ones | B.Q. & H.S.              | Vaccinate against B.Q., F.M.D. & H.S.  |
| exce                       |   | Deworming                | Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.  |
|                            |   | Slush & Flood Management | <ul> <li>Provide clean and wholesome water. Keep animals in safe place.</li> <li>Avoid grazing at the periphery of flood. Animals should be protected against illness caused due to damp weather. Mineral mixtures/vitamins should be fed a this time. Do not allow to drink flood water.</li> </ul> |
|                            |   | Milk fever in Milch cow  | 70-100ml of a mixture of Ca+ and Phosphorus daily @ 5-7days.   |

Fishery:

| Type of<br>Farming         | Stage                    | Management                       | Agro-metrological advisories  |
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| Carp culture               | Nurseries/ grow-out      | Pond and water                   | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ . Drain out excess water accumulated in fish pond due to rain.  |
|                            |                          | Feed                             | Provide feed 2-3 times @ 5-10% body weight per day.   |
|                            |                          |                                  | Provide good feed having 30% crude protein fortified with vitamins and mineral.   |
|                            |                          | Fish                             | For semi-intensive farming, 8000-10000 fingerlings can be stocked in one hectare pond.  |
|                            |                          |                                  | - Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.   |
|                            |                          |                                  | - Sampling of fish for growth, disease should be done regularly by netting.   |
| Integrated Fish<br>Farming | Fish                     | Same as grow out fish management | Same as grow out fish farming management.   |
|                            | Pig                      |                                  | About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency. |
|                            | Duck                     |                                  | 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.   |
| Apply Agri lime            | in the fish culture pond | after the water level rea        | aches normal depth after flood @ 30-35 kg /ha at 30days interval.   |