



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**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 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Bishnupur (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 30.0 – 32.0 °C & minimum temp. 22.0 – 23.0 °C. Relative humidity may reach upto 99 % (max RH) & 67 % (min RH). The average wind speed may be 2 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

I. Meghachandra Singh  
Scientist i/c, IAAS



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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Chandel (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 30.0 – 33.0 °C & minimum temp. 22.0 – 24.0 °C. Relative humidity may reach upto 99 % (max RH) & 84 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Gramin Krishi Mausam Seva”**

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|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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Scientist i/c, IAAS**



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**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**Churachandpur**

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**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Churachandpur (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 28.0 – 31.0 °C & minimum temp. 21.0 – 23.0 °C. Relative humidity may reach upto 99 % (max RH) & 59 % (min RH). The average wind speed may be 2-3 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |





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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

I. Meghachandra Singh  
Scientist i/c, IAAS



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**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 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Imphal - East (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 30.0 – 32.0 °C & minimum temp. 22.0 – 24.0 °C. Relative humidity may reach upto 100 % (max RH) & 62 % (min RH). The average wind speed may be 2-3 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | <ul style="list-style-type: none"><li>- Give Ranizole suspension @ 3ml/ 10 kg body weight</li><li>- Give Niclomar tablet @ 75mg/ kg body weight</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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><ul style="list-style-type: none"><li>- Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.</li><li>- Sampling of fish for growth, disease should be done regularly by netting.</li></ul>                                                                                                                                                                                                                                                       |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**I. Meghachandra Singh  
Scientist i/c, IAAS**





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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**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 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Imphal - West (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 29.0 – 32.0 °C & minimum temp. 23.0 – 24.0 °C. Relative humidity may reach upto 100 % (max RH) & 57 % (min RH). The average wind speed may be 2-3 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**I. Meghachandra Singh  
Scientist i/c, IAAS**



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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Senapati (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 26.0 – 30.0 °C & minimum temp. 17.0 – 20.0 °C. Relative humidity may reach upto 99 % (max RH) & 57 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**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 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Tamenglong (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 30.0 – 33.0 °C & minimum temp. 23.0 – 24.0 °C. Relative humidity may reach upto 100 % (max RH) & 55 % (min RH). The average wind speed may be 2-3 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |





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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Thoubal (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 29.0 – 32.0 °C & minimum temp. 21.0 – 23.0 °C. Relative humidity may reach upto 100 % (max RH) & 75 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabbage/<br/>Cauliflower/<br/>Tomato</b> | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| <b>Animal Sciences</b>                      |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of the animal</b>                   | <b>Growth stage</b>                          | <b>Disease/ infestation</b>     | <b>Agro-meteorological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Poultry (Chicken/<br/>Turkey/ Duck)</b>  | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                             |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sheep/ Goat</b>                          | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                                              | Deworming                       | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | - Give Niclomar tablet @ 75mg/ kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pig</b>                                  | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cattle / Buffalo/<br/>Mithun</b>         | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| <b>Fishery:</b>                             |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type of Farming</b>                      | <b>Stage</b>                                 | <b>Management</b>               | <b>Agro-metrological advisories</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Carp culture</b>                         | Nurseries/ grow-out                          | Pond and water                  | Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 – 7.5. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                             |                                              | Feed                            | Provide feed 2 times @ 5 % 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.<br>- Sampling of fish for growth, disease should be done regularly by netting.                                                                                                                                                                                                                                                                                                            |
| <b>In integrated Fish Farming</b>           | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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



**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**

**11<sup>th</sup> September, 2015**

**Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 12<sup>th</sup> to 16<sup>th</sup> September, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (8<sup>th</sup> to 10<sup>th</sup> September, 2015)**

During last three days sky was mainly clear to mainly cloudy. No rainfall was recorded during last four days. Maximum temperature range observed was 27.8 – 31.0 °C, range of minimum temperature observed was 22.5 – 22.8 °C, mean relative humidity observed in morning and afternoon were 87.0 % and 75.33 % respectively. The average wind speed range was 2.8 – 3.6 km/hr.

**Weather forecast for next five days of Ukhrul (12<sup>th</sup> to 16<sup>th</sup> September, 2015)**

There may be light rain from Thursday. Sky will remain mainly clear to partly cloudy with maximum temp. of 27.0 – 30.0 °C & minimum temp. 17.0 – 19.0 °C. Relative humidity may reach upto 98 % (max RH) & 71 % (min RH). The average wind speed may be 2-3 km/ hr during next five days. The Wind direction may be westerly upto Saturday and north-easterly to easterly upto Wednesday during next five days.

| Name of the crop                         | Stage                            | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field Crops</b>                       |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kharif Rice</b>                       | Vegetative to panicle initiation |                    | - Hand weeding may be done for the crop at panicle initiation. Drain out water and top dress with 33kg Urea/ ha. Irrigate the field after 48hrs of top dressing. Maintain water depth of 5cm in the rice field.                                                                                                                                                                                                                                                                  |
|                                          |                                  | Sucking insects    | Imidachloprid @ 4-7 ml/ 15 litres of water.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                          |                                  | Stem borer         | Coragen @3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).                                                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Stem rot           | Spray Validamycin 3L @ 2.5 ml/lit or Thiophanate methyl 75 WP @ 1 g/ lit of water                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Soybean</b>                           | Flowering to fruiting            | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                       |
| <b>Groundnut</b>                         | Flowering to pegging             | Tikka disease      | - Monitor infestation of Tikka disease. If observed, spray Mancozeb @ 2.6g + Carbendazim @ 1g/litre water at 30, 50 and 60 days after sowing.                                                                                                                                                                                                                                                                                                                                    |
|                                          |                                  | Rust               | - Spray Bayleton @ 10g/ 15 ml of water or Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.                                                                                                                                                                                                                                                                                                                                                                            |
|                                          |                                  | Hairy caterpillars | - To control red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage (seed)</b>                    |                                  |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desiccant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                                                                          |
| <b>Horticulture Crops</b>                |                                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>French Bean, Broad bean &amp; Pea</b> | Land preparation                 |                    | Land preparation for sowing of french bean, broad bean and pea must be completed when there is enough moisture in the soil. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. |
| <b>Onion</b>                             | Nursery                          |                    | Preparation for raising nursery (variety- Nasik Red) in slightly cooler and drier area in bright sunshine.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ginger</b>                            | Rhizome development              | Shoot borer        | - Spray Nimbicidine @ 2-5ml/lit water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ginger / Turmeric</b>                 | Rhizome development              | Soft rot           | Apply Mancozeb + Metalxyl or Carbendazim 12% + Mancozeb 12% @ 2g/lit water.                                                                                                                                                                                                                                                                                                                                                                                                      |



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



**“Gramin Krishi Mausam Seva”**

|                                    |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage/<br>Cauliflower/<br>Tomato | Nursery Preparation                          |                                 | <ul style="list-style-type: none"><li>- Prepare raised beds of 1.5-2 sq.m for sowing 10g seed for small scale nursery raising.</li><li>- For transplanting 1 sangam area 75g seed for hybrid variety can be sown in 12sq.m area.</li><li>- Select fertile area with sunshine and free from water logging.</li><li>- Protective measures must be taken up against damping off in seedlings. Temporary rain shelter structures may be used to protect against rainfall.</li></ul> Recommended varieties:<br>Cabbage: Rareball.<br>Cabbage: White flash (medium size) and Swetha (big size). |
| Animal Sciences                    |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Name of the animal                 | Growth stage                                 | Disease/ infestation            | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Poultry (Chicken/<br>Turkey/ Duck) | All age groups                               | Contingency plan and management | <ul style="list-style-type: none"><li>- Give ENROX liq. @ 2ml/ 10 kg body weight for 5 days.</li><li>- Give green grasses sufficiently &amp; mix with ground maize/ rice bran.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- At least use turpauline sheet for shelter of sites.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                      |
|                                    |                                              |                                 | Start keeping new batch chicks in case of layer variety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Sheep/ Goat                        | Above 3 months of age                        | Vaccination                     | - Vaccinate against Enterotoxaemia/ M.C.C.V. (left overs).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                    |                                              | Deworming                       | <ul style="list-style-type: none"><li>- Give Ranizole suspension @ 3ml/ 10 kg body weight</li><li>- Give Niclomar tablet @ 75mg/ kg body weight</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Pig                                | All age groups                               | Management                      | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                    |                                              | Deworming                       | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Cattle / Buffalo/<br>Mithun        | Above 3 months of age (as and when required) | Deworming                       | Give Rafoxamide plus Levamisole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight ( Ranizole).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                    |                                              | Ectoparasite infestations       | Diclorvo/ Organophosphates @ 60ml/ 20 lit of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                    |                                              |                                 | <ul style="list-style-type: none"><li>- Shift the animals in higher elevated site.</li><li>- Give Amoxyline/ Salbactum or any antibiotic for 5 days.</li><li>- Add mineral mixture &amp; vitamins either in feed or water or both.</li><li>- Add water sanitizer in drinking water/ or add potash.</li></ul>                                                                                                                                                                                                                                                                              |
| Fishery:                           |                                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Type of 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. Apply Lime @ 25-30kg/ ha everymonth.<br>Broadcast Green AQ @2 litre/ha by mixing with water.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                    |                                              | Feed                            | Provide feed 2 times @ 5 % 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><ul style="list-style-type: none"><li>- Stocking ratio may be maintained at 40% of surface feeder, 30% column feeder and 30% bottom feeder.</li><li>- Sampling of fish for growth, disease should be done regularly by netting.</li></ul>                                                                                                                                                                                                                                                       |
| In integrated Fish Farming         | Pig                                          |                                 | About 30-40 two months old pigs may be kept for fertilization of the one ha fish 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

I. Meghachandra Singh  
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