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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

#### Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of 6<sup>th</sup> Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0 - 27.9 °C, range of minimum temperature observed was 11.8 - 14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5 –

#### Weather forecast for next five days of Thoubal (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of 24.0 – 25.0 °C & minimum temp. 10.0 - 11.0 °C. Relative humidity may reach upto 100 % (max RH) & 47 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop         | Stage Pest an               | d disease Agro-meteorological advisories                                                                                                        |
|--------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops              |                             |                                                                                                                                                 |
| Kharif Rice              | Maturity to                 | - Harvest rice if 80 % of the spikelet is yellow & facility for threshing is                                                                    |
|                          | harvesting and              | available as there is likely to have light rain.                                                                                                |
|                          | post- harvesting            | - Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.                                 |
|                          |                             | - After proper threshing, grains must be sundried well before storage. Dry                                                                      |
|                          |                             | grains/ seeds to 12-14% moisture if mechanical thresher is used.                                                                                |
| Rapeseed/ Mustard        | Sowing to early             | - After harvesting of rice, zero tillage rape seed may be sown (seed rate is                                                                    |
|                          | vegetative                  | 10-12 kg/ha) when soil in the field is soft at 30 cm row spacing.                                                                               |
|                          |                             | - Recommended variety – M-27.                                                                                                                   |
|                          |                             | - After 10-15 days of sowing plant to plant distance may be maintained at                                                                       |
|                          |                             | 10-15cm by thinning.                                                                                                                            |
| Field Pea                | Land preparation            | - Land preparation may be done. Sowing may be done at a spacing of                                                                              |
|                          | to sowing and               | 30cm x 10-15cm.                                                                                                                                 |
|                          | early vegetative            | - Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds                                                                        |
| T (4)                    | 0 1                         | with Bavistin @ 2.5 mg/ lit of water before sowing.                                                                                             |
| Lentil                   | Sowing to early             | - After harvesting of rice, lentil seed may be sown.                                                                                            |
| C4 ( T)                  | vegetative                  |                                                                                                                                                 |
| Storage (seed)           |                             | - Clean and store the seeds in RC-seed bins after proper drying of the                                                                          |
|                          |                             | desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture. |
| Horticulture Crops       |                             | grams, store in wen ventuated godowns with regular check for moisture.                                                                          |
|                          | g morning hours is advised. |                                                                                                                                                 |
|                          |                             | c mulches after earthing up and weeding to conserve residual soil moisture as well as                                                           |
| to maintain the soil ter |                             | e mulches after earthing up and weeding to conserve residual soft moisture as wen as                                                            |
| Dolichos bean            | Flowering to                | - As the temperature is going down, aphid population will be more.                                                                              |
| Donoilos Dean            | fruiting                    | - Harvest the mature fruits and spray neem based pesticides.                                                                                    |
|                          |                             | - If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of                                                                 |
|                          |                             | water.                                                                                                                                          |
|                          |                             | - Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +                                                                         |
|                          |                             | 3kg FYM will helpful for fruiting.                                                                                                              |

|               | r                            |                                                                                                                                                                                                                                                        |
|---------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolichos bean | Flowering to fruiting        | <ul> <li>As the temperature is going down, aphid population will be more.</li> <li>Harvest the mature fruits and spray neem based pesticides.</li> <li>If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> </ul> |
|               |                              | - Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP + 3kg FYM will helpful for fruiting.                                                                                                                                             |
| Garlic        | Land preparation to planting | - Garlic bulblets may be planted in prepared beds.                                                                                                                                                                                                     |
| Garden pea    | Sowing to early vegetative   | Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before sowing treat seeds with Rhizobium leguminosarum, jiggery or gur solution so that the seeds are soaked well or follow soil inoculation with                                        |

phosphobacterium. Maintain the depth of sowing to 2-3cm.



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



|                                     |                                                               |                                  | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days ol seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                               | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | Growth stage                                                  | Disease/ infestation             | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                 | - Vaccinate against Ranikhet disease using Lasota strain vaccine and R <sub>2</sub> B vaccine.                                                                                                                                                                                                                                                                                              |
|                                     |                                                               | Vaccination for Fowl pox         | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                        | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                       | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming                        | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                |
|                                     |                                                               | Ectoparasites (skin infestation) | Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                                                                                           |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                        | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation        | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | 1                                                             | Black Quarter/ Black leg disease | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            | ·                                                             |                                  |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                       | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture  Nurseries/ grow- out  |                                                               | Pond and water                   | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                     |                                                               | Feed                             | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                     |                                                               | Fish                             | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{\text{th}}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was  $26.0-27.9\,^{\circ}\text{C}$ , range of minimum temperature observed was  $11.8-14.2\,^{\circ}\text{C}$ , mean relative humidity observed in morning and afternoon were  $88.5\,^{\circ}$  and  $50.0\,^{\circ}$  respectively. The average wind speed range was  $1.5-2.8\,\text{km/hr}$ .

## Weather forecast for next five days of Ukhrul (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $20.0-23.0\,^{\circ}\text{C}$  & minimum temp.  $7.0-9.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 98 % (max RH) & 45 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop                                     | Stage                                                 | Pest and disease    | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------|-------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops                                          |                                                       | ı                   |                                                                                                                                                                                                                                                                                                                                                              |
| Kharif Rice                                          | Maturity to<br>harvesting and<br>post- harvesting     |                     | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry</li> </ul> |
| Rapeseed/ Mustard                                    | Sowing to early vegetative                            |                     | grains/ seeds to 12-14% moisture if mechanical thresher is used.  - After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.  - Recommended variety – M-27.  - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.             |
| Field Pea                                            | Land preparation<br>to sowing and<br>early vegetative |                     | <ul> <li>Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                     |
| Lentil                                               | Sowing to early vegetative                            |                     | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                         |
| Storage (seed)                                       |                                                       |                     | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                       |
| Horticulture Crops                                   |                                                       | ·                   |                                                                                                                                                                                                                                                                                                                                                              |
| * Light watering durin                               |                                                       |                     |                                                                                                                                                                                                                                                                                                                                                              |
| * In fruit crops and per<br>to maintain the soil ter |                                                       | oly organic mulches | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                  |
| Dolichos bean                                        | Flowering to fruiting                                 |                     | <ul> <li>As the temperature is going down, aphid population will be more.</li> <li>Harvest the mature fruits and spray neem based pesticides.</li> <li>If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> </ul>                                                                                                       |

| to mammam the sor | r temperature.   |                                                                                 |
|-------------------|------------------|---------------------------------------------------------------------------------|
| Dolichos bean     | Flowering to     | - As the temperature is going down, aphid population will be more.              |
|                   | fruiting         | - Harvest the mature fruits and spray neem based pesticides.                    |
|                   |                  | - If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of |
|                   |                  | water.                                                                          |
|                   |                  | - Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +         |
|                   |                  | 3kg FYM will helpful for fruiting.                                              |
| Garlic            | Land preparation | - Garlic bulblets may be planted in prepared beds.                              |
|                   | to planting      |                                                                                 |
| Garden pea        | Sowing to early  | Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before            |
| _                 | vegetative       | sowing treat seeds with Rhizobium leguminosarum, jiggery or gur solution        |
|                   |                  | so that the seeds are soaked well or follow soil inoculation with               |

phosphobacterium. Maintain the depth of sowing to 2-3cm.



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



|                                     |                                                               |                                  | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                               | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | Growth stage                                                  | Disease/ infestation             | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                 | - Vaccinate against Ranikhet disease using Lasota strain vaccine and $R_2B$ vaccine.                                                                                                                                                                                                                                                                                                        |
|                                     |                                                               | Vaccination for Fowl pox         | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                        | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                       | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming                        | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                |
|                                     |                                                               | Ectoparasites (skin infestation) | Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                                                                                           |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                        | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation        | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | 1                                                             | Black Quarter/ Black leg disease | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            |                                                               |                                  |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                       | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture Nurseries/ grow out    |                                                               | Pond and water                   | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                     |                                                               | Feed                             | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                     |                                                               | Fish                             | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

### MANIPUR BULLETIN 10<sup>th</sup> November, 2015

#### Bishnupur

Garlic

Garden pea

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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

Land preparation to planting

Sowing to early

vegetative

## Weather forecast for next five days of Bishnupur (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $24.0-26.0\,^{\circ}\text{C}$  & minimum temp.  $8.0-9.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 99 % (max RH) & 44 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop                                                               | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops                                                                    |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Kharif Rice                                                                    | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>- Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>- Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard                                                              | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                         |
| Field Pea                                                                      | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>- Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>- Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                        |
| Lentil                                                                         | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                                |
| Storage (seed)                                                                 |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                              |
| Horticulture Crops                                                             |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| * Light watering durin<br>* In fruit crops and per<br>to maintain the soil ten | rennial vegetables, app                               |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                         |
| Dolichos bean                                                                  | Flowering to fruiting                                 |                  | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +</li> </ul>                                                                                       |

3kg FYM will helpful for fruiting.

- Garlic bulblets may be planted in prepared beds.

Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before

so that the seeds are soaked well or follow soil inoculation with phosphobacterium. Maintain the depth of sowing to 2-3cm.

- Avoid plucking off of young shoots especially of dwarf tang short



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



|                                     |                                                               |                                            | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days of seedlings)                          | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                                         | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | I Growth stage                                                | Disease/ infestation                       | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                          | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                           | - Vaccinate against Ranikhet disease using Lasota strain vaccine and $R_2B$ vaccine.                                                                                                                                                                                                                                                                                                        |
|                                     |                                                               | Vaccination for Fowl pox                   | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                                  | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                                 | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming Ectoparasites (skin infestation) | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.  Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                             |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                                  | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation                  | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | •                                                             | Black Quarter/ Black leg disease           | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            |                                                               |                                            |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                                 | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture Nurseries/ grow out    |                                                               | Pond and water                             | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                     |                                                               | Feed                                       | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                     |                                                               | Fish                                       | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{\rm th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

## Weather forecast for next five days of Chandel (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $23.0-25.0\,^{\circ}\text{C}$  & minimum temp.  $9.0-10.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 98 % (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop         | Stage                                                 | Pest and disease   | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|-------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops              | 1                                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Kharif Rice              | Maturity to<br>harvesting and<br>post- harvesting     |                    | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard        | Sowing to early vegetative                            |                    | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                  |
| Field Pea                | Land preparation<br>to sowing and<br>early vegetative |                    | <ul> <li>- Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>- Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                  |
| Lentil                   | Sowing to early vegetative                            |                    | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                          |
| Storage (seed)           |                                                       |                    | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                        |
| Horticulture Crops       |                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| * Light watering durin   |                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                          |                                                       | ly organic mulches | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                   |
| to maintain the soil ten | *                                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Dolichos bean            | Flowering to fruiting                                 |                    | <ul> <li>As the temperature is going down, aphid population will be more.</li> <li>Harvest the mature fruits and spray neem based pesticides.</li> <li>If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> </ul>                                                                                                                                                                        |

|               | F                            |                                                                                                                                                                                                                                                                                                                                               |
|---------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolichos bean | Flowering to fruiting        | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +</li> </ul> |
| C - I'        | Y 1                          | 3kg FYM will helpful for fruiting.                                                                                                                                                                                                                                                                                                            |
| Garlic        | Land preparation to planting | - Garlic bulblets may be planted in prepared beds.                                                                                                                                                                                                                                                                                            |
| Garden pea    | Sowing to early              | Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before                                                                                                                                                                                                                                                                          |
|               | vegetative                   | sowing treat seeds with Rhizobium leguminosarum, jiggery or gur solution so that the seeds are soaked well or follow soil inoculation with                                                                                                                                                                                                    |

phosphobacterium. Maintain the depth of sowing to 2-3cm.



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



|                                     |                                                               |                                            | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days of seedlings)                          | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                                         | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | I Growth stage                                                | Disease/ infestation                       | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                          | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                           | - Vaccinate against Ranikhet disease using Lasota strain vaccine and $R_2B$ vaccine.                                                                                                                                                                                                                                                                                                        |
|                                     |                                                               | Vaccination for Fowl pox                   | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                                  | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                                 | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming Ectoparasites (skin infestation) | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.  Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                             |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                                  | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation                  | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | •                                                             | Black Quarter/ Black leg disease           | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            |                                                               |                                            |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                                 | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture Nurseries/ grow out    |                                                               | Pond and water                             | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                     |                                                               | Feed                                       | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                     |                                                               | Fish                                       | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

# MANIPUR BULLETIN 10<sup>th</sup> November, 2015

#### Churachandpur

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

## Weather forecast for next five days of Churachandpur (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $23.0-25.0\,^{\circ}\text{C}$  & minimum temp.  $8.0-10.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 99 % (max RH) & 44 % (min RH). The average wind speed may be 3-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop                                                               | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops                                                                    |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Kharif Rice                                                                    | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard                                                              | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                  |
| Field Pea                                                                      | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>- Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>- Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                  |
| Lentil                                                                         | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                          |
| Storage (seed)                                                                 |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                        |
| Horticulture Crops                                                             |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| * Light watering durin<br>* In fruit crops and per<br>to maintain the soil ter | rennial vegetables, app                               |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                   |
| Dolichos bean                                                                  | Flowering to fruiting                                 |                  | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +</li> </ul>                                                                                 |

|               | r                |                                                                                 |
|---------------|------------------|---------------------------------------------------------------------------------|
| Dolichos bean | Flowering to     | - As the temperature is going down, aphid population will be more.              |
|               | fruiting         | - Harvest the mature fruits and spray neem based pesticides.                    |
|               |                  | - If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of |
|               |                  | water.                                                                          |
|               |                  | - Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +         |
|               |                  | 3kg FYM will helpful for fruiting.                                              |
| Garlic        | Land preparation | - Garlic bulblets may be planted in prepared beds.                              |
|               | to planting      |                                                                                 |
| Garden pea    | Sowing to early  | Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before            |
| _             | vegetative       | sowing treat seeds with Rhizobium leguminosarum, jiggery or gur solution        |
|               |                  | so that the seeds are soaked well or follow soil inoculation with               |

phosphobacterium. Maintain the depth of sowing to 2-3cm.



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



|                    |                           |                      | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                  |
|--------------------|---------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage            | Vegetative (26-30 days of | ld                   | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of |
|                    | seedlings)                |                      | transplanting.                                                                                                                           |
| Cauliflower        | Vegetative                |                      | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as                                                                          |
|                    | (25-30 days of            | ld                   | basal dose followed by 50 kg urea in two splits dose during 20-40 days                                                                   |
|                    | seedlings)                |                      | after transplanting for main season crops.                                                                                               |
| Tree Bean          | Pre-bearing ar            | nd                   | - Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to pre-                                                                    |
|                    | bearing trees             |                      | bearing and bearing trees before flowering for better yield.                                                                             |
|                    | (flowering to             |                      | - Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to                                                             |
|                    | fruiting)                 |                      | prevent Verticillium wilt.                                                                                                               |
|                    |                           |                      | - 20g Carbofuran 3G/ plant may also be in-corporated in soil as                                                                          |
|                    |                           |                      | prophylactic measure against bark borer/ termites.                                                                                       |
| Animal Sciences    |                           |                      |                                                                                                                                          |
| Name of the animal | Growth stage              | Disease/ infestation | Agro-meteorological advisories                                                                                                           |
| Poultry (Chicken/  | All age                   | Care & management    | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once                                                                        |
| Turkey/ Duck)      | groups                    |                      | only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                     |
|                    |                           | Ranikhet disease     | - Vaccinate against Ranikhet disease using Lasota strain vaccine and R <sub>2</sub> B vaccine.                                           |
|                    |                           | Vaccination for Fowl | -Vaccine has to be given for Fowl pox.                                                                                                   |
| Sheep/ Goat        | Above 3 months of age     | Deworming            | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                      |
| Pig                | All age                   | Management           | - Keep sheds dry.                                                                                                                        |
|                    | groups                    | Deworming            | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                             |
|                    |                           | Ectoparasites (skin  | Add Butox @ 2ml/lit of water and brush with the solution twice every                                                                     |
|                    |                           | infestation)         | fortnightly.                                                                                                                             |
| Cattle / Buffalo/  | Above 3                   | Deworming            | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @                                                                      |
| Mithun             | months of                 |                      | 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower                                                                     |
|                    | age (as and               |                      | altitude.                                                                                                                                |
|                    | when                      | Ectoparasitic        | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution                                                                    |
|                    | required)                 | infestation          | twice a week                                                                                                                             |
|                    |                           | Black Quarter/ Black | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3                                                                         |
|                    |                           | leg disease          | months                                                                                                                                   |
| Fishery:           |                           |                      |                                                                                                                                          |
| Type of Farming    | Stage                     | Management           | Agro-metrological advisories                                                                                                             |
| Carp culture       | Nurseries/ grow-          | Pond and water       | Remove aquatic weeds.                                                                                                                    |
|                    | out                       |                      | Maintain minimum depth of $1.0 - 1.5$ m and pH at $7.0 - 7.5$ .                                                                          |
|                    |                           |                      | Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2                                                                           |
|                    |                           |                      | litre/ha by mixing with water.                                                                                                           |
|                    |                           | Feed                 | Provide feed 2 times @ 5 % body weight per day.                                                                                          |
|                    |                           |                      | Provide good feed having 30% crude protein fortified with vitamins and                                                                   |
|                    |                           |                      | mineral.                                                                                                                                 |
|                    |                           |                      | mmetal.                                                                                                                                  |
|                    |                           | Fish                 |                                                                                                                                          |
|                    |                           | Fish                 | - Sampling of fish for growth, diseased fish should be done regularly by                                                                 |
|                    |                           | Fish                 |                                                                                                                                          |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 2015

#### Imphal-East

Garlic

Garden pea

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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{\rm th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

Land preparation

Sowing to early

to planting

vegetative

## Weather forecast for next five days of Imphal-East (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $25.0-27.0\,^{\circ}\text{C}$  & minimum temp.  $9.0-11.0\,^{\circ}\text{C}$ . Relative humidity may reach upto  $100\,\%$  (max RH) & 38 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop                                                               | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops                                                                    |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Kharif Rice                                                                    | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>- Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>- Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>- After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard                                                              | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                         |
| Field Pea                                                                      | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                            |
| Lentil                                                                         | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                                |
| Storage (seed)                                                                 |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                              |
| Horticulture Crops                                                             |                                                       | ı                |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| * Light watering durin<br>* In fruit crops and per<br>to maintain the soil ter | rennial vegetables, app                               |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                         |
| Dolichos bean                                                                  | Flowering to fruiting                                 |                  | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP + 3kg FYM will helpful for fruiting.</li> </ul>                                                    |

- Garlic bulblets may be planted in prepared beds.

Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before

so that the seeds are soaked well or follow soil inoculation with phosphobacterium. Maintain the depth of sowing to 2-3cm.

- Avoid plucking off of young shoots especially of dwarf tang short



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



|                                         |                           |                                                                   | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------|---------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                                 | Vegetative (26-30 days of | ld                                                                | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of                                                                                                                                                                                                                                                                                                                                                            |
|                                         | seedlings)                |                                                                   | transplanting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Cauliflower                             | Vegetative                |                                                                   | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                         | (25-30 days ol            | ld                                                                | basal dose followed by 50 kg urea in two splits dose during 20-40 days                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                         | seedlings)                |                                                                   | after transplanting for main season crops.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Tree Bean                               | Pre-bearing ar            | nd                                                                | - Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to pre-                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                         | bearing trees             |                                                                   | bearing and bearing trees before flowering for better yield.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                         | (flowering to             |                                                                   | - Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                         | fruiting)                 |                                                                   | prevent Verticillium wilt.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                         |                           |                                                                   | - 20g Carbofuran 3G/ plant may also be in-corporated in soil as                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                         |                           |                                                                   | prophylactic measure against bark borer/ termites.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Animal Sciences                         |                           | 1                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Name of the animal                      | U                         | Disease/ infestation                                              | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Poultry (Chicken/                       | All age                   | Care & management                                                 | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Turkey/ Duck)                           | groups                    |                                                                   | only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                         |                           | Ranikhet disease                                                  | - Vaccinate against Ranikhet disease using Lasota strain vaccine and R <sub>2</sub> B vaccine.                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                         |                           | Vaccination for Fowl pox                                          | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Sheep/ Goat                             | Above 3 months of age     | Deworming                                                         | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Pig                                     | All age                   | Management                                                        | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                         | groups                    | Deworming                                                         | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                         |                           | Ectoparasites (skin                                               | Add Butox @ 2ml/lit of water and brush with the solution twice every                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                         |                           | infestation)                                                      | fortnightly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cattle / Buffalo/                       | Above 3                   | Deworming                                                         | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mithun                                  | months of                 |                                                                   | 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                         | age (as and               |                                                                   | altitude.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                         | when                      | Ectoparasitic                                                     | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                         | required)                 | infestation                                                       | twice a week                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                         | required)                 |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                         | required)                 | Black Quarter/ Black                                              | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| T. 1                                    | required)                 |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <u> </u>                                | required)                 | Black Quarter/ Black leg disease                                  | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                         | Stage                     | Black Quarter/ Black leg disease  Management                      | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                                               |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease                                  | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories Remove aquatic weeds.                                                                                                                                                                                                                                                                                                                                                                         |
| Type of Farming                         | Stage                     | Black Quarter/ Black leg disease  Management                      | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.                                                                                                                                                                                                                                                                                                            |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management                      | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2                                                                                                                                                                                                                                            |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management Pond and water       | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                             |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management                      | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.  Provide feed 2 times @ 5 % body weight per day.                                                                                                                                                            |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management Pond and water       | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.  Provide feed 2 times @ 5 % body weight per day.  Provide good feed having 30% crude protein fortified with vitamins and                                                                                    |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management Pond and water  Feed | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.  Provide feed 2 times @ 5 % body weight per day.  Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                           |
| Fishery:  Type of Farming  Carp culture | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management Pond and water       | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.  Provide feed 2 times @ 5 % body weight per day.  Provide good feed having 30% crude protein fortified with vitamins and mineral.  - Sampling of fish for growth, diseased fish should be done regularly by |
| Type of Farming                         | Stage<br>Nurseries/ grow- | Black Quarter/ Black leg disease  Management Pond and water  Feed | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months  Agro-metrological advisories  Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.  Provide feed 2 times @ 5 % body weight per day.  Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                           |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{\rm th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

## Weather forecast for next five days of Imphal-West (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $25.0-27.0\,^{\circ}\text{C}$  & minimum temp.  $9.0-11.0\,^{\circ}\text{C}$ . Relative humidity may reach upto  $100\,\%$  (max RH) & 38 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop   | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops        |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Kharif Rice        | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard  | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                  |
| Field Pea          | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>- Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>- Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                  |
| Lentil             | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                          |
| Storage (seed)     |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                        |
| Horticulture Crops |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                    |                                                       |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                   |
| Dolichos bean      | Flowering to fruiting                                 |                  | <ul> <li>As the temperature is going down, aphid population will be more.</li> <li>Harvest the mature fruits and spray neem based pesticides.</li> <li>If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +</li> <li>2kg EYM will helpful for fruiting</li> </ul>                                              |

|               | - · · · - · · · · · · · · · · · · · · · |                                                                                 |
|---------------|-----------------------------------------|---------------------------------------------------------------------------------|
| Dolichos bean | Flowering to                            | - As the temperature is going down, aphid population will be more.              |
|               | fruiting                                | - Harvest the mature fruits and spray neem based pesticides.                    |
|               |                                         | - If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of |
|               |                                         | water.                                                                          |
|               |                                         | - Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +         |
|               |                                         | 3kg FYM will helpful for fruiting.                                              |
| Garlic        | Land preparation                        | - Garlic bulblets may be planted in prepared beds.                              |
|               | to planting                             |                                                                                 |
| Garden pea    | Sowing to early                         | Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before            |
| _             | vegetative                              | sowing treat seeds with Rhizobium leguminosarum, jiggery or gur solution        |
|               |                                         | so that the seeds are soaked well or follow soil inoculation with               |

phosphobacterium. Maintain the depth of sowing to 2-3cm.



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



|                                                   |                                                       |                                            | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|-------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                                           | Vegetative (26-30 days ol seedlings)                  | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower Vegetative (25-30 days old seedlings) |                                                       | ld                                         | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                                         | Pre-bearing and bearing trees (flowering to fruiting) | nd .                                       | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal               | Growth stage                                          | Disease/ infestation                       | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)                | All age groups                                        | Care & management                          | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                                   |                                                       | Ranikhet disease                           | - Vaccinate against Ranikhet disease using Lasota strain vaccine and $R_2B$ vaccine.                                                                                                                                                                                                                                                                                                        |
|                                                   |                                                       | Vaccination for Fowl pox                   | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                                       | Above 3<br>months of age                              | Deworming                                  | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                               | All age                                               | Management                                 | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                                   | groups                                                | Deworming Ectoparasites (skin infestation) | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.  Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                             |
| Cattle / Buffalo/<br>Mithun                       | Above 3 months of age (as and                         | Deworming                                  | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                                   | when required)                                        | Ectoparasitic infestation                  | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                                   | •                                                     | Black Quarter/ Black leg disease           | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                                          |                                                       |                                            |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                                   | Stage                                                 | Management                                 | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture                                      | Nurseries/ grow-<br>out                               | Pond and water                             | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                                   |                                                       | Feed                                       | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                                   |                                                       | Fish                                       | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 2015

#### Senapati

Garlic

Garden pea

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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{\rm th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

Land preparation

Sowing to early

to planting

vegetative

## Weather forecast for next five days of Senapati (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $20.0-23.0\,^{\circ}\text{C}$  & minimum temp.  $7.0-10.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 98 % (max RH) & 36 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop                                                               | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops                                                                    |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Kharif Rice                                                                    | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard                                                              | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                  |
| Field Pea                                                                      | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>- Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>- Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                  |
| Lentil                                                                         | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                          |
| Storage (seed)                                                                 |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                        |
| Horticulture Crops                                                             |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| * Light watering durin<br>* In fruit crops and per<br>to maintain the soil ter | rennial vegetables, app                               |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                   |
| Dolichos bean                                                                  | Flowering to fruiting                                 |                  | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP +</li> </ul>                                                                                 |

3kg FYM will helpful for fruiting.

- Garlic bulblets may be planted in prepared beds.

Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before

so that the seeds are soaked well or follow soil inoculation with phosphobacterium. Maintain the depth of sowing to 2-3cm.

- Avoid plucking off of young shoots especially of dwarf tang short



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



|                                     |                                                               |                                  | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days ol seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                               | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | Growth stage                                                  | Disease/ infestation             | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                 | - Vaccinate against Ranikhet disease using Lasota strain vaccine and R <sub>2</sub> B vaccine.                                                                                                                                                                                                                                                                                              |
|                                     |                                                               | Vaccination for Fowl pox         | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                        | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                       | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming Ectoparasites (skin    | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.  Add Butox @ 2ml/lit of water and brush with the solution twice every                                                                                                                                                                                                                                                          |
|                                     |                                                               | infestation)                     | fortnightly.                                                                                                                                                                                                                                                                                                                                                                                |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                        | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation        | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | ,                                                             | Black Quarter/ Black leg disease | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            | <u>'</u>                                                      | · - <del></del>                  |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                       | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture                        | Nurseries/ grow-<br>out                                       | Pond and water                   | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
|                                     |                                                               | Feed                             | Provide feed 2 times @ 5 % body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.                                                                                                                                                                                                                                                             |
|                                     |                                                               | Fish                             | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |



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



#### "Gramin Krishi Mausam Seva"

#### MANIPUR BULLETIN 10<sup>th</sup> November, 2015

#### **Tamenglong**

Garlic

Garden pea

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 11<sup>th</sup> to 15<sup>th</sup> November, 2015 as below:

# Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> November, 2015)

During last four days sky was mainly clear to partly cloudy but foggy during morning hours of  $6^{th}$  Nov, 2015. **No** rainfall was recorded during last four days. Maximum temperature range observed was 26.0-27.9 °C, range of minimum temperature observed was 11.8-14.2 °C, mean relative humidity observed in morning and afternoon were 88.5 % and 50.0 % respectively. The average wind speed range was 1.5-2.8 km/hr.

Land preparation

Sowing to early

to planting

vegetative

## Weather forecast for next five days of Tamenglong (11<sup>th</sup> to 15<sup>th</sup> November, 2015)

There may be no rain upto Sunday. Sky will remain mainly clear to partly cloudy with maximum temp. of  $25.0-27.0\,^{\circ}\text{C}$  & minimum temp.  $8.0-9.0\,^{\circ}\text{C}$ . Relative humidity may reach upto 98 % (max RH) & 40 % (min RH). The average wind speed may be 2-4 km/ hr during next five days. The Wind direction may be easterly during next five days.

| Name of the crop   | Stage                                                 | Pest and disease | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Crops        |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Kharif Rice        | Maturity to<br>harvesting and<br>post- harvesting     |                  | <ul> <li>Harvest rice if 80 % of the spikelet is yellow &amp; facility for threshing is available as there is likely to have light rain.</li> <li>Stacking of the harvested panicles for 5-7 days by turning the heap of panicles can help in better threshing.</li> <li>After proper threshing, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.</li> </ul> |
| Rapeseed/ Mustard  | Sowing to early vegetative                            |                  | <ul> <li>After harvesting of rice, zero tillage rape seed may be sown (seed rate is 10-12 kg/ ha) when soil in the field is soft at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>                                                                                                                  |
| Field Pea          | Land preparation<br>to sowing and<br>early vegetative |                  | <ul> <li>Land preparation may be done. Sowing may be done at a spacing of 30cm x 10-15cm.</li> <li>Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.</li> </ul>                                                                                                                                                                                      |
| Lentil             | Sowing to early vegetative                            |                  | - After harvesting of rice, lentil seed may be sown.                                                                                                                                                                                                                                                                                                                                                                          |
| Storage (seed)     |                                                       |                  | - Clean and store the seeds in RC-seed bins after proper drying of the desicant charcoal. Check for moisture content or weight of seeds. For grains, store in well ventilated godowns with regular check for moisture.                                                                                                                                                                                                        |
| Horticulture Crops |                                                       |                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                    |                                                       |                  | after earthing up and weeding to conserve residual soil moisture as well as                                                                                                                                                                                                                                                                                                                                                   |
| Dolichos bean      | Flowering to fruiting                                 |                  | <ul> <li>- As the temperature is going down, aphid population will be more.</li> <li>- Harvest the mature fruits and spray neem based pesticides.</li> <li>- If it is in initial flowering stage, then spray Cypermethrin @ 2 ml/ litre of water.</li> <li>- Earthing up of soil, followed by top dressing with 20g DAP + 5g MOP + 3kg FYM will helpful for fruiting.</li> </ul>                                              |

- Garlic bulblets may be planted in prepared beds.

Sowing of Garden pea may be done at a spacing of 10cm x 20cm. Before

so that the seeds are soaked well or follow soil inoculation with phosphobacterium. Maintain the depth of sowing to 2-3cm.

- Avoid plucking off of young shoots especially of dwarf tang short



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



|                                     |                                                               |                                  | duration crops (variety like Azad, Arkel, etc.). It will delay fruiting & reduce yield.                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cabbage                             | Vegetative (26-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 46 kg Urea in two splits dose after 20-40 days of transplanting.                                                                                                                                                                                                                                     |
| Cauliflower                         | Vegetative (25-30 days of seedlings)                          | ld                               | - Apply 50 kg DAP, 25kg MOP and 10 cart loads of FYM/ sangam as basal dose followed by 50 kg urea in two splits dose during 20-40 days after transplanting for main season crops.                                                                                                                                                                                                           |
| Tree Bean                           | Pre-bearing ar<br>bearing trees<br>(flowering to<br>fruiting) | nd                               | <ul> <li>Apply 60g DAP+ 10g MOP + 20g Tracel (micronutrient mixture) to prebearing and bearing trees before flowering for better yield.</li> <li>Spray Carbendazim @ 2g/ lit water to moist the soil to a depth of 1 ft. to prevent Verticillium wilt.</li> <li>20g Carbofuran 3G/ plant may also be in-corporated in soil as prophylactic measure against bark borer/ termites.</li> </ul> |
| Animal Sciences  Name of the animal | Growth stage                                                  | Disease/ infestation             | Agro-meteorological advisories                                                                                                                                                                                                                                                                                                                                                              |
| Poultry (Chicken/<br>Turkey/ Duck)  | All age groups                                                | Care & management                | - Deworm with Albendazole liquid @ 30 to 40 ml for 100 birds once only and repeat with half dose after 7 days. Also, deworm at every 3 weeks interval.                                                                                                                                                                                                                                      |
|                                     |                                                               | Ranikhet disease                 | - Vaccinate against Ranikhet disease using Lasota strain vaccine and R <sub>2</sub> B vaccine.                                                                                                                                                                                                                                                                                              |
|                                     |                                                               | Vaccination for Fowl pox         | -Vaccine has to be given for Fowl pox.                                                                                                                                                                                                                                                                                                                                                      |
| Sheep/ Goat                         | Above 3<br>months of age                                      | Deworming                        | - Give Ranizole suspension @ 3ml/ 10 kg body weight                                                                                                                                                                                                                                                                                                                                         |
| Pig                                 | All age                                                       | Management                       | - Keep sheds dry.                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | groups                                                        | Deworming                        | Give Morantel citrate tab. (Banminth) @ 15mg/kg body weight.                                                                                                                                                                                                                                                                                                                                |
|                                     |                                                               | Ectoparasites (skin infestation) | Add Butox @ 2ml/lit of water and brush with the solution twice every fortnightly.                                                                                                                                                                                                                                                                                                           |
| Cattle / Buffalo/<br>Mithun         | Above 3 months of age (as and                                 | Deworming                        | Give Rafoxamide plus Levamizole (Rafox plus)/ Ranizole suspension @ 1ml/ 2kg body weight or 5.5ml/ 10 kg body weight (Ranizole) in lower altitude.                                                                                                                                                                                                                                          |
|                                     | when required)                                                | Ectoparasitic infestation        | Butox liquid @ 2 ml. in 1 litre of water and brush using the solution twice a week                                                                                                                                                                                                                                                                                                          |
|                                     | 1                                                             | Black Quarter/ Black leg disease | Vaccinate with B.Q & H.S. vaccine for all the animals of above 3 months                                                                                                                                                                                                                                                                                                                     |
| Fishery:                            |                                                               |                                  |                                                                                                                                                                                                                                                                                                                                                                                             |
| Type of Farming                     | Stage                                                         | Management                       | Agro-metrological advisories                                                                                                                                                                                                                                                                                                                                                                |
| Carp culture                        | Nurseries/ grow-<br>out                                       | Pond and water                   | Remove aquatic weeds.  Maintain minimum depth of 1.0 - 1.5 m and pH at 7.0 - 7.5.  Apply Lime @ 25-30kg/ ha every month or broadcast Green AQ @ 2 litre/ha by mixing with water.                                                                                                                                                                                                            |
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|                                     |                                                               | Fish                             | <ul><li>Sampling of fish for growth, diseased fish should be done regularly by netting.</li><li>Partial harvesting may be done to reduce fish population as the water level is going down.</li></ul>                                                                                                                                                                                        |