



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Tamenglong (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 35 °C & minimum temp. 23 - 24 °C. Relative humidity may reach up to 100 % (max RH) & 63 % (min RH). The average wind speed may be 2 km/hr.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthraxnose	Spray Carbendazim 12% + Mencozeb 63% WP @1 mg/lit of water.
		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.



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**“Gramin Krishi Mausam Seva”**



<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
		Greening	- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyrifos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Thoubal**

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<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)</b>          Observed mainly cloudy to overcast sky and <b>43.1 mm</b> rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Thoubal (15<sup>th</sup> to 19<sup>th</sup> July, 2017)</b>          Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 35 °C &amp; minimum temp. 22 - 25 °C. Relative humidity may reach up to 99 % (max RH) &amp; 74 % (min RH). The average wind speed may be 2 km/hr.</p>
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As the water level in crop field of valley area still high, no cultural operations can be done in the fields. Shift the birds/ animals to safe/ higher altitude places; provide clean drinking water with antibiotic. Preventive measures to avoid flies and mosquitoes population in and around the birds/ animals. After the water level goes down, before shifting birds/ animals back to its sheds, proper cleaning must be done and preventive measures to avoid diseases to them must be taken up. When water level goes down advisories as under may be followed.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthracnose	Spray Carbendazim 12% + Mencozeb 63% WP @1 mg/lit of water.



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		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.
<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
	Greening		- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyriphos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

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<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having pH <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
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**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Ukhrul**

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**Weather forecast for next five days of Ukhrul (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

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		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
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		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017*****Imphal East***

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)</b>  Observed mainly cloudy to overcast sky and <b>43.1 mm</b> rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.</p>	<p><b>Weather forecast for next five days of Imphal East (15<sup>th</sup> to 19<sup>th</sup> July, 2017)</b>  Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 32 - 34 °C &amp; minimum temp. 22 - 24 °C. Relative humidity may reach up to 100 % (max RH) &amp; 64 % (min RH). The average wind speed may be 2 - 4 km/hr.</p>
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As the water level in crop field of valley area still high, no cultural operations can be done in the fields. Shift the birds/ animals to safe/ higher altitude places; provide clean drinking water with antibiotic. Preventive measures to avoid flies and mosquitoes population in and around the birds/ animals. After the water level goes down, before shifting birds/ animals back to its sheds, proper cleaning must be done and preventive measures to avoid diseases to them must be taken up. When water level goes down advisories as under may be followed.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Hemicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthracnose	Spray Carbendazim 12% + Mencozeb 63% WP @1 mg/lit of water.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.
<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
	Greening		- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyriphos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Imphal West**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Imphal West (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 32 - 34 °C & minimum temp. 22 - 24 °C. Relative humidity may reach up to 100 % (max RH) & 62 % (min RH). The average wind speed may be 2 km/hr.

As the water level in crop field of valley area still high, no cultural operations can be done in the fields. Shift the birds/ animals to safe/ higher altitude places; provide clean drinking water with antibiotic. Preventive measures to avoid flies and mosquitoes population in and around the birds/ animals. After the water level goes down, before shifting birds/ animals back to its sheds, proper cleaning must be done and preventive measures to avoid diseases to them must be taken up. When water level goes down advisories as under may be followed.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthracnose	Spray Carbendazim 12% + Mencozeb 63% WP @ 1 mg/lit of water.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.
<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
	Greening		- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyriphos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having pH 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017*****Bishnupur***

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Bishnupur (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 35 °C & minimum temp. 23 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 71 % (min RH). The average wind speed may be 2 km/hr.

As the water level in crop field of valley area still high, no cultural operations can be done in the fields. Shift the birds/ animals to safe/ higher altitude places; provide clean drinking water with antibiotic. Preventive measures to avoid flies and mosquitoes population in and around the birds/ animals. After the water level goes down, before shifting birds/ animals back to its sheds, proper cleaning must be done and preventive measures to avoid diseases to them must be taken up. When water level goes down advisories as under may be followed.

***Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.***

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Hemicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthracnose	Spray Carbendazim 12% + Mencozeb 63% WP @ 1 mg/lit of water.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.
<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
		Greening	- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyriphos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having pH 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****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 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Chandel (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 35 °C & minimum temp. 22 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 75 % (min RH). The average wind speed may be 2-4 km/hr.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthraxnose	Spray Carbendazim 12% + Mencozeb 63% WP @ 1 mg/lit of water.
		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
		Greening	- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyrifos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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



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

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Churachandpur (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 35 °C & minimum temp. 23 - 25 °C. Relative humidity may reach up to 99 % (max RH) & 72 % (min RH). The average wind speed may be 2 km/hr.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>

**Horticulture Crops**

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthraxnose	Spray Carbendazim 12% + Mencozeb 63% WP @ 1 mg/lit of water.
		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
		Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
		Greening	- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyrifos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

<b>Type of Farming</b>	<b>Stage</b>	<b>Management</b>	<b>Agro-metrological advisories</b>
<b>Carp culture</b>	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)  
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**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****14<sup>th</sup> July, 2017****Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 15<sup>th</sup> to 19<sup>th</sup> July, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (11<sup>th</sup> to 14<sup>th</sup> July, 2017)**

Observed mainly cloudy to overcast sky and **43.1 mm** rainfall was recorded during past three days. Maximum temperature range of 24.7 to 30.5 °C and minimum temperature range of 21.2 to 22.5 °C with mean relative humidity 95.67 % max and 78.67 % min was recorded in the past three days.

**Weather forecast for next five days of Senapati (15<sup>th</sup> to 19<sup>th</sup> July, 2017)**

Likely to have no rainfall upto Wednesday with partly cloudy to mainly cloudy sky and maximum temp. 33 - 34 °C & minimum temp. 23 - 25 °C. Relative humidity may reach up to 98 % (max RH) & 59 % (min RH). The average wind speed may be 2-4 km/hr.

**Seedling of rice may be raised within this week using dry bed method with RC Maniphou-12 for transplanting before 15<sup>th</sup> August. Prepare 20 plots for transplanting in a hectare field. Plot size is 4 x 20 feet and sow seeds @ 2kg/ plot.**

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	Nursery to land preparation and transplanting (kharif rice)		<ul style="list-style-type: none"> <li>- Apply Carbofuran 3G @2kg/ha a week before uprooting the seedling.</li> <li>- Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.</li> <li>- After rains, uproot seedlings at 25 to 35 days after sowing depending on availability of water. About 1200 to 1300 bundles of seedlings (40cm diameter) may be required for transplanting one ha area.</li> </ul>
	Direct seeding with drum seeder		<ul style="list-style-type: none"> <li>- The seeds may be sown when water level goes down.</li> <li>- Recommended rice var. RC Maniphou-7.</li> <li>- Treat seed with Humicil @ 5ml/kg seed.</li> <li>- Puddle the field and level properly.</li> <li>- Drain out water 24 hrs before sowing.</li> <li>- Use just pre-germinated seeds.</li> </ul>
<b>Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- At knee height stage, apply urea @ 43 kg Urea/ ha after rains.</li> <li>- Measures must be taken to avoid water logging in the crop field.</li> </ul>
<b>Soybean / Groundnut</b>	Vegetative & late sowing		<ul style="list-style-type: none"> <li>- Earthing-up and thinning may be done at 30 to 40 days after sowing of crop after rain.</li> <li>- Avoid leaf eating caterpillars/ insects at least upto 60 days after sowing.</li> <li>- Late sowing may be done upto mid of July.</li> </ul>
<b>Blackgram &amp; Rice bean</b>	Vegetative		<ul style="list-style-type: none"> <li>- Avoid sowing in water logged fields. Also, avoid hairy caterpillars.</li> <li>- Late sowing may be done.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger</b>	Vegetative		Water soaked lesions may develop at the base of the pseudo-stem. Later on rotting may spread to the rhizome. To prevent it spray Redomil MZ72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times.
<b>Passion Fruit</b>	Fruiting	Fruit rot	Spray Metalxyl + Mencozeb @ 2 g/lit water at 7 days interval.
		Anthraco nose	Spray Carbendazim 12% + Mencozeb 63% WP @1 mg/lit of water.
		Collar rot	Drench the soil of collar region with 1% Bordeaux mixture.
		Brown spot	- Remove the infected leaves and burn and spray Zineb@ 2 mg/ lit of water.
		Termite	Apply Chloropyriphos 10%G @ 25kg/ha into the soil.
		Fruit fly	Apply poison baiting with Jaggary + fruit juice + Malathion (20:20:1) @ 40-50 baits/ ha.
	Thrips	Spray Imidachloprid 17.8% SL @ 1ml/ lit of water.	



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



<b>Orange/Lime/ Lemon</b>	Vegetative		Apply 650g Urea, 1250g SSP and 450g MOP per tree in circular trench around the trunk. Spray Carbendazim @2g/lit water or Metalxyl + Mencozeb @ 2.5 g/lit water on sunny day. After 7 days spray Imidachloprid @ 5ml/ 10 lit of water.
		Greening	- Spray Streptocycline @ 1g/10 lit of water or Tetracycline@5g/10 litre water.
<b>Tree bean</b>	Transplanting/ Fertilizer application		One year or more than a year old quality seedling may be transplanted in the pit. Recommended spacing is 10x10 m from plant to plant and row to row At the time of planting apply 5 kg FYM + 30 gm lime+30 gm linden 5% dust + 5 ml Chlorpyrifos 20 EC + 1.5 g Mancozeb + Carbendazim per pit. For 7 yrs and above and for bearing plants apply 7 kg FYM, 120 Kg urea, 300 gm SSP, 80 gm MOP, 1 Kg lime should be applied.

**Animal Sciences**

**\* Provide clean drinking water for birds and animals.**

- Apply Himax ointment twice daily on animal body to prevent bite of fly and mosquitoes.

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - Avoid fungal infested feed. - Use dry litter material in the shed, if moist apply lime powder @ 1kg per 100 ft <sup>2</sup> area.
<b>Sheep/ Goat</b>	All age groups	Vaccination	- Sheep should be vaccinated against B.Q./ H.S.
<b>Pig</b>	All age groups except the young ones	De-worming	- De-worming of animals should be done using Albendazole @7.5 mg/kg b.wt.
		Vaccination	- Vaccinate against FMD.
		Management	- Provide adequate amount of wholesome water (drinking). - Essential body salts may be provided.
<b>Cattle</b>	All age groups excepts the young ones	B.Q. & H.S.	Vaccinate against B.Q., F.M.D. & H.S.
		Deworming	Use Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		Slush & Flood Management	Provide wholesome water. Adequate arrangements for the animals to be kept at the safety place be made. Avoid grazing at the periphery of flood.
		Milk fever in Milch cow	70-100ml of a mixture of Ca <sup>+</sup> and Phosphorus daily @ 5-7days.

**Fishery:**

\* Encircle pond with happa net or raise the pond dyke height to avoid escape of fishes.

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ <b>0.5 ml/kg</b> of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Seed production		Maintain good quality water having p <sup>H</sup> 7-8, Dissolved Oxygen: 5-8ppm; CO <sub>2</sub> : Nil – 0.3ppm and alkalinity 70-110 ppm.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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