



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

**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Churachandpur (29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 28 to 31 °C & minimum temp. 23 to 24 °C. Relative humidity may reach upto 100 % (max RH) & 61 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Easterly to Southerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016****Rainfall at many places likely over northeastern states****Weather warning for next five days \*****Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Endoparasites	➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>



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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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(I. Meghachandra Singh)  
Scientist i/c, IAAS



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<b>Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)</b> The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.	<b>Weather forecast for next five days of Imphal East (29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)</b> Likely to have light rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 28 to 29 °C & minimum temp. 22 to 23 °C. Relative humidity may reach upto 100 % (max RH) & 53 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Easterly to North Westerly during the next five days.
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	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
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The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Imphal West**

**(29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)** Likely to have light to moderate rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 29 to 32 °C & minimum temp. 21.0 to 22.0 °C. Relative humidity may reach upto 99 % (max RH) & 52 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Easterly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
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<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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



<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"> <li>➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; mouth Disease.</li> </ul>
		Endoparasites	<ul style="list-style-type: none"> <li>➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li> </ul>
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Fish feed should be provided @ 10-15 % body weight per day.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>





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**“Gramin Krishi Mausam Seva”**



	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Senapati (29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)**

Likely to have light to moderate rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 29 to 31 °C & minimum temp. 22 to 23 °C. Relative humidity may reach upto 99 % (max RH) & 52 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Easterly to North West Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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**“Gramin Krishi Mausam Seva”**



<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Endoparasites	➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>



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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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Scientist i/c, IAAS



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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Tamenglong**

**(29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)** Likely to have light to moderate rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 27 to 31 °C & minimum temp. 22 to 23 °C. Relative humidity may reach upto 99 % (max RH) & 53 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South South-Easterly to South Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"> <li>➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; mouth Disease.</li> </ul>
		Endoparasites	<ul style="list-style-type: none"> <li>➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li> </ul>
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Fish feed should be provided @ 10-15 % body weight per day.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>





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**“Gramin Krishi Mausam Seva”**



	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Thoubal (29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)**

Likely to have light to moderate rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 28 to 30 °C & minimum temp. 23 °C. Relative humidity may reach upto 100 % (max RH) & 62 % (min RH). The average wind speed may be 2 to 4 km/hr. Wind direction may be South-Easterly to North Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"> <li>➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; mouth Disease.</li> </ul>
		Endoparasites	<ul style="list-style-type: none"> <li>➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li> </ul>
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Fish feed should be provided @ 10-15 % body weight per day.</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>



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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Ukhrul**

**(29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)** Likely to have light to moderate rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 29 to 31 °C & minimum temp. 21 to 22 °C. Relative humidity may reach upto 99 % (max RH) & 59 % (min RH). The average wind speed may be 2 to 4 km/hr. Wind direction may be South South-Easterly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
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<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
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<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
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<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"> <li>➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; mouth Disease.</li> </ul>
		Endoparasites	<ul style="list-style-type: none"> <li>➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li> </ul>
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### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
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		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Bishnupur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

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The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Bishnupur**

**(29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)** Likely to have light rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 28 to 31 °C & minimum temp. 24 °C. Relative humidity may reach upto 99 % (max RH) & 60 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Easterly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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**“Gramin Krishi Mausam Seva”**



<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium per manganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Endoparasites	➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>



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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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**MANIPUR BULLETIN****28<sup>th</sup> June, 2016****Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 29<sup>th</sup> June to 3<sup>rd</sup> July, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 27<sup>th</sup> June, 2016)**

The sky remained variable to overcast. Rainfall of 18.3 mm was recorded during past four days. Maximum temperature range observed was 31.5 to 32.0 °C, range of minimum temperature observed was 21.8 to 23.4 °C, mean relative humidity observed in morning and afternoon were 92.5 % and 77.0 % respectively. The average wind speed range was 3.5 to 4.5 km/hr.

**Weather forecast for next five days of Chandel**

**(29<sup>th</sup> June to 3<sup>rd</sup> July, 2016)** Likely to have light to moderate rains upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 27 to 30 °C & minimum temp. 23 °C. Relative humidity may reach upto 99 % (max RH) & 65 % (min RH). The average wind speed may be 3 to 5 km/hr. Wind direction may be South South-Easterly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 3<sup>rd</sup> to 5<sup>th</sup> July, 2016**

**Rainfall at many places likely over northeastern states**

**Weather warning for next five days \***

**Heavy to very heavy rain very likely at isolated places over Manipur on 30<sup>th</sup> June & 2<sup>nd</sup> July**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Maturity to Harvesting		<ul style="list-style-type: none"> <li>➤ Drain the water in the field about 10-15 days before expected date of harvesting</li> <li>➤ Rice can be harvested when 80% of panicles turn hard &amp; golden yellow.</li> <li>➤ Over maturity should be avoided to reduce shattering losses.</li> <li>➤ If the crops are ready to harvest, then harvest it before rain (as there is likely to have moderate rain from 3<sup>rd</sup> July)</li> </ul>
<b>Main kharif rice</b>	Nursery for transplanting		<ul style="list-style-type: none"> <li>➤ Puddle the field and apply 1 kg <i>Furadan 3G</i>, 7 days before uprooting in the nursery bed.</li> <li>➤ Uproot the seedling of about 14-21 days old.</li> <li>➤ Maximum of 2-3 seedling/hill; 20-25 cm row to row &amp; 10 cm plant to plant spacing should be given for line transplanting.</li> <li>➤ Seedling of Main season rice can be raised upto first week of July and can be transplanted within 3<sup>rd</sup> week of July (for late transplanting).</li> </ul>
<b>Groundnut</b>	Seedling to vegetative		<ul style="list-style-type: none"> <li>➤ Thin out plants at spacing of 30 cm x 15 cm and weed out.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ If not sown early, sowing may be done before 1<sup>st</sup> fortnight of July.</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and inter-culture operation may be done and apply 100 Kg Urea and 300 Kg SSP at 2-3 months.</li> <li>➤ Avoid water logging in and around the crop field.</li> </ul>
<b>Soybean</b>	Sowing		<ul style="list-style-type: none"> <li>➤ Sow seed @ 40-45 Kg/ha or 10-11.3 kg of seed/sangam and recommended variety is J.S.335 at seed spacing of 30x15 sq cm.</li> <li>➤ If not sown early, sowing must be done before 1<sup>st</sup> fortnight of July</li> <li>➤ Hand weeding should be done before 30-35 days, after sowing.</li> </ul>
<b>Horticulture Crops</b>			
<b>Cucurbits (Water-melon, pumpkin, bitter gourd, etc.)</b>	Vegetative/harvest		<ul style="list-style-type: none"> <li>➤ Four leaf stage, young plants may be transplanted after rain</li> <li>➤ Avoid water stagnation in the root zone, harvest the mature ones.</li> <li>➤ Avoid the fruits to touch the ground by staking or with the support of dried twigs</li> </ul>
<b>Chilli</b>	Seed Collection/Harvest		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</li> <li>➤ After harvesting of matured ones spray Copper oxichloride(0.3% or Mancozeb alternatively with Metalxyl and Mancozeb combination at 15 days interval</li> </ul>
<b>Cow pea</b>	Harvesting		<ul style="list-style-type: none"> <li>➤ As keeping quality is poor green ones should be harvested at the earliest.</li> </ul>
<b>Turmeric</b>	Intercrop		<ul style="list-style-type: none"> <li>➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.</li> </ul>



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<b>Passion Fruit</b>	Flowering to fruiting	<ul style="list-style-type: none"> <li>■ Fruit rot</li> <li>■ Fruit fly</li> <li>■ Brown Spot</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spray Metalxyl+Mancozeb @ 2 g/ltr water at 7 days interval</li> <li>➤ Apply poison baiting with Jaggery+ fruit juice+Malathion (20:20:1) @ 40-50 baits/ha.</li> <li>➤ Remove the infected leaves and burn. Spray Zineb@ 2 mg/ltr water.</li> </ul>
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		<ul style="list-style-type: none"> <li>➤ Maintain water at a depth of 2.5-3 ft.</li> <li>➤ Use new slips having atleast 4-5 nodes for planting</li> <li>➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles.</li> <li>➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval.</li> <li>➤ Seed rate: 840 steps/sangam</li> </ul>

### Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management  ■Coccidiosis	<ul style="list-style-type: none"> <li>➤ Provide only clean/wholesome drinking water only</li> <li>➤ Do not give mud water as there is chance of colibacillosis during the rainy season</li> <li>➤ Use water sanitizer in drinking water/potassium permanganate (few grains)</li> <li>■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.</li> </ul>
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming  Skin Diseases	<ul style="list-style-type: none"> <li>➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem</li> <li>➤ Give multivitamins @15ml orally</li> <li>➤ Use quality disinfectants for disinfecting the surrounding of the sheds</li> <li>➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.</li> <li>➤ Use HIMAX ointment application two times a day if there is any wound.</li> </ul>
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	<ul style="list-style-type: none"> <li>➤ Mineral mixture be added in feed @ 10-20g/adult animal</li> <li>➤ Spray with Skin Heal Spray in sufficient quantity.</li> <li>➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.</li> </ul>
<b>Cattle</b>	All age groups excepts the young ones	B.Q./ H.S/FMD	➤ If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.
		Endoparasites	➤ Deworm orally once using Nilzan-F @ 90ml/ 300 kg body weight.
		Care & management	<ul style="list-style-type: none"> <li>➤ Mix enough quantity salts in feed and water</li> <li>➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given.</li> <li>➤ Food supplements may be given @20-30 gm/animals.</li> <li>➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands.</li> <li>➤ Care should be taken to protect yoke gall/bursitis.</li> </ul>

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.0-1.5m</li> <li>➤ Agri-lime should be applied in ponds</li> <li>➤ Ponds should be free from aquatic weed, predatory insects and fish</li> </ul>
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	<ul style="list-style-type: none"> <li>➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond</li> <li>➤ Duration is 25-45 days.</li> </ul>
	Grow out	Pond and water	<ul style="list-style-type: none"> <li>➤ Water depth should be maintain at 1.5-2.0m</li> <li>➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval</li> </ul>
		Feed	<ul style="list-style-type: none"> <li>➤ Sampling of fish for growth, disease (if any) should be done by regular netting.</li> <li>➤ Partial harvesting of marketable size fishes are also recommended</li> </ul>
		Fish	<ul style="list-style-type: none"> <li>➤ Feed should be provided @ 3-5 % body weight per day</li> <li>➤ Feed can be fed at 2 times a day.</li> </ul>





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	Paddy cum fish culture	water	<ul style="list-style-type: none"><li>➤ Water depth of the field can be increase by pumping or draining if water is available to continue the culture.</li><li>➤ 20-40% of the paddy plot can be made as 1.0-1.5m depth trenches</li><li>➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field.</li></ul>
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