



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

**Weather forecast for next five days of Tamenglong (22<sup>nd</sup> to 26<sup>th</sup> June, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 28 to 30 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 98 % (max RH) & 55 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South Westerly to South West Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016****Rainfall at many places likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.



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

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

**“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>
--	------------------------	-------	---

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

**Weather forecast for next five days of Thoubal (22<sup>nd</sup> to 26<sup>th</sup> June, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 28 to 30 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 97 % (max RH) & 56 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North West Westerly to North Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016**

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

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.



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

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

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

**(22<sup>nd</sup> to 26<sup>th</sup> June, 2016)** Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 28 to 30 °C & minimum temp. 18.0 to 20.0 °C. Relative humidity may reach upto 96 % (max RH) & 60 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be Southerly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016**

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

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>





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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.





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

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

**Weather forecast for next five days of Bishnupur (22<sup>nd</sup> to 26<sup>th</sup> June, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 29 to 31 °C & minimum temp. 19.0 to 20.0 °C. Relative humidity may reach upto 97 % (max RH) & 59 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016****Rainfall at many places likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.



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

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

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

**(22<sup>nd</sup> to 26<sup>th</sup> June, 2016)** Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 28 to 30 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 97 % (max RH) & 63 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South Westerly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016**

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

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.





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

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

**Weather forecast for next five days of Churachandpur (22<sup>nd</sup> to 26<sup>th</sup> June, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 28 to 30 °C & minimum temp. 20.0 to 21.0 °C. Relative humidity may reach upto 99 % (max RH) & 60 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be Southerly to South South-Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016****Rainfall at many places likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.



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

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



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

**MANIPUR BULLETIN****21<sup>st</sup> June, 2016****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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

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

**(22<sup>nd</sup> to 26<sup>th</sup> June, 2016)** Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 29 to 31 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 98 % (max RH) & 49 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North West Westerly to North-Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016****Rainfall at many places likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.





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

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



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

**MANIPUR BULLETIN****21<sup>st</sup> June, 2016****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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

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

**(22<sup>nd</sup> to 26<sup>th</sup> June, 2016)** Likely to have light rain upto Sunday. Sky will remain mainly cloudy, with maximum temp. 29 to 31 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 98 % (max RH) & 51 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South West Westerly to North West Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016****Rainfall at many places likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.



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

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



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

**MANIPUR BULLETIN****21<sup>st</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 22<sup>nd</sup> to 26<sup>th</sup> June, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (17<sup>th</sup> to 20<sup>th</sup> June, 2016)**

The sky remained mainly cloudy to overcast. Rainfall of 29.3 mm was recorded during past four days. Maximum temperature range observed was 29.4 to 30.9 °C, range of minimum temperature observed was 21.0 to 22.2 °C, mean relative humidity observed in morning and afternoon were 91.25 % and 81 % respectively. The average wind speed range was 4.1 to 7.1 km/hr.

**Weather forecast for next five days of Senapati (22<sup>nd</sup> to 26<sup>th</sup> June, 2016)**

Likely to have light rain upto Sunday. Sky will remain mainly cloudy to overcast, with maximum temp. 28 to 30 °C & minimum temp. 18.0 to 19.0 °C. Relative humidity may reach upto 98 % (max RH) & 48 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South Westerly to Westerly during the next five days.

**Weather outlook for subsequence 2 days from 26<sup>th</sup> to 28<sup>th</sup> June, 2016**

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

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Early kharif rice</b>	Grain filling-Maturity		<ul style="list-style-type: none"> <li>➤ Maintain water level at 5-8 cm. Drain/pump out excess water from the crop field due to rain</li> <li>➤ Check for any insect-pest in the crop.</li> </ul>
<b>Main kharif rice</b>	Land preparation for sowing	<ul style="list-style-type: none"> <li>■ Thrips (c.n. Ingellai chubi)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prepare 700m<sup>2</sup> of land for transplanting one hectare area. Soak seed overnight and incubate for 1 day.</li> <li>➤ Apply 65 Kg Urea, 250 Kg SSP and 45 Kg MOP per hectare at the time of final leveling.</li> <li>■ Apply lambda cyhalothrin @ 15 ml/15ltr of water.</li> </ul>
	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 stage		<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> </ul>
<b>Blackgram</b>	Sowing to seedling		<ul style="list-style-type: none"> <li>➤ Seed rate of 10-15 kg/ hectare may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan @3 kg/ha.</li> <li>➤ Drain out the field</li> </ul>
<b>Ginger/ Turmeric</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Weeding and interculture 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> </ul>
<b>Chilli</b>	Seed Collection		<ul style="list-style-type: none"> <li>➤ Seed collection should be done preferably on bright sunshine hours.</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>Banana (Grand naine)</b>	Transplanting		<ul style="list-style-type: none"> <li>➤ For upland areas this is the right time for transplanting of banana.</li> </ul>



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



<b>Turmeric</b>	Intercrop		➤ Turmeric/ginger may also be intercrop with other vegetables like French bean in the early stage of crop.
<b>Cucumber</b>	Transplanting		➤ Transplanting to be followed after rain.
<b>Water mimosa (Neptunia Oleracea)</b>	Planting and First harvest		➤ Maintain water at a depth of 2.5-3 ft. ➤ Use new slips having atleast 4-5 nodes for planting ➤ Maintain spacing of 3mX3m, plant 3 slips/hill-slips may be tied with a polythene rope or pegging may be done with small poles. ➤ Harvesting may be done after 2-2.5 month depending upon the growth and weather at 10-15 days interval. ➤ Seed rate: 840 steps/sangam

### 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	➤ Provide only clean/wholesome drinking water only ➤ Do not give mud water as there is chance of colibacillosis during the rainy season ➤ Use water sanitizer in drinking water/potassium permanganate (few grains) ■ Use Amprolium @1.5g/ltr of drinking water for 5-7 days and electrolyte can be associated.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Care & management  Deworming	➤ Keep the animals on the platform if possible to avoid <i>Pneumonia</i> due to moisture problem ➤ Give multivitamins @15ml orally ➤ Deworming of animals should be done using Albendazole/Levamisole @7.5 mg/kg b.wt. or ivermectin @50mg/kg b. wt.
<b>Pig</b>	All age groups except the young ones	Care and management  Mites infestation Enteric disease	➤ Mineral mixture be added in feed @ 10-20g/adult animal ➤ Spray with Skin Heal Spray in sufficient quantity. ➤ Use Livocin @ 7.5 mg per kg b.wt. 3-5 days.
<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	➤ Mix enough quantity salts in feed and water ➤ If the animals do not have access to green fodders, vitamin A injection/ supplements should be given. ➤ Food supplements may be given @20-30 gm/animals. ➤ Prepare fields for transplantation of fodders, grasses, especially in the available foot hills/fallow lands. ➤ Care should be taken to protect yoke gall/bursitis.

### Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp culture</b>	Fish nurseries	Pond and water	➤ Water depth should be maintain at 1.0-1.5m ➤ Agri-lime should be applied in ponds ➤ Ponds should be free from aquatic weed, predatory insects and fish
		Feed	➤ Fish feed should be provided @ 10-15 % body weight per day.
		Fish	➤ About 5 million feeding fries are stocked per 1 ha for pre-nursing pond ➤ Duration is 25-45 days.
	Grow out	Pond and water	➤ Water depth should be maintain at 1.5-2.0m ➤ Regular liming should be done @ 30-35 kg/ha at 30 days interval
		Feed	➤ Sampling of fish for growth, disease (if any) should be done by regular netting. ➤ Partial harvesting of marketable size fishes are also recommended
		Fish	➤ Feed should be provided @ 3-5 % body weight per day ➤ Feed can be fed at 2 times a day.





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

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

**“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>
--	------------------------	-------	---

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