

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”****MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

**Significant past weather for the preceding bi-weekly of  
Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)**

The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4<sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.

**Weather forecast for next five days of Bishnupur  
(6<sup>th</sup> to 10<sup>th</sup> August, 2016)**

Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 32 - 34 °C & minimum temp. 23 - 25 °C. Relative humidity may reach upto 100 % (max RH) & 94 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Westerly during the next five days.

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”****MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

**Significant past weather for the preceding bi-weekly of  
Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)**

The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4<sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.

**Weather forecast for next five days of Chandel  
(6<sup>th</sup> to 10<sup>th</sup> August, 2016)**

Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 31 - 33 °C & minimum temp. 22 - 24 °C. Relative humidity may reach upto 99 % (max RH) & 94 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South-Westerly during the next five days.

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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





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

**MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)</b> The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4 <sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.	<b>Weather forecast for next five days of Churachandpur (6<sup>th</sup> to 10<sup>th</sup> August, 2016)</b> Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 32 - 34 °C & minimum temp. 22 - 24 °C. Relative humidity may reach upto 100 % (max RH) & 95 % (min RH). The average wind speed may be 0-2 km/hr. Wind direction may be South-Westerly during the next five days.
--	---

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		- One hand weeding may be done after rain at 20-30 days after transplanting. - After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing. - Ridges should be well constructed to maintain water level of 5-8cm.
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		➤ Weeding may be done on sunny days to control weeds/ insect-pest. ➤ Maintain proper drainage system to avoid water logging. ➤ Mature cobs may be harvested.
<b>Soybean/ Groundnut</b>	Vegetative		➤ Maintain proper drainage system to avoid water logging ➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing. ➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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



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

**MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)</b> The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4 <sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.	<b>Weather forecast for next five days of Imphal East (6<sup>th</sup> to 10<sup>th</sup> August, 2016)</b> Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 32 - 34 °C & minimum temp. 23 - 25 °C. Relative humidity may reach upto 100 % (max RH) & 94 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Westerly during the next five days.
--	---

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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



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

**MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)</b> The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4 <sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.	<b>Weather forecast for next five days of Imphal West (6<sup>th</sup> to 10<sup>th</sup> August, 2016)</b> Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 32 - 33 °C & minimum temp. 22 - 24 °C. Relative humidity may reach upto 100 % (max RH) & 93 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South-Westerly during the next five days.
--	---

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythothrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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



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

**MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

<b>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)</b> The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4 <sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.	<b>Weather forecast for next five days of Senapati (6<sup>th</sup> to 10<sup>th</sup> August, 2016)</b> Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 28 - 31 °C & minimum temp. 19 - 21 °C. Relative humidity may reach upto 100 % (max RH) & 92 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Westerly during the next five days.
--	--

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		- One hand weeding may be done after rain at 20-30 days after transplanting. - After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing. - Ridges should be well constructed to maintain water level of 5-8cm.
		Thrips & Leaf folder	➤ Spray Lambdacythothrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		➤ Weeding may be done on sunny days to control weeds/ insect-pest. ➤ Maintain proper drainage system to avoid water logging. ➤ Mature cobs may be harvested.
<b>Soybean/ Groundnut</b>	Vegetative		➤ Maintain proper drainage system to avoid water logging ➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing. ➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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



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

**MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)**

The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4<sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.

**Weather forecast for next five days of Tamenglong (6<sup>th</sup> to 10<sup>th</sup> August, 2016)**

Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 33 - 35 °C & minimum temp. 23 - 25 °C. Relative humidity may reach upto 100 % (max RH) & 92 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Westerly during the next five days.

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	<ul style="list-style-type: none"> <li>➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.</li> </ul>
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	<ul style="list-style-type: none"> <li>➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.</li> </ul>
<b>Storage (seed)</b>			<ul style="list-style-type: none"> <li>➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.</li> </ul>
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		<ul style="list-style-type: none"> <li>- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.</li> </ul>
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	<ul style="list-style-type: none"> <li>- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.</li> </ul>
		Anthraxnose	<ul style="list-style-type: none"> <li>- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.</li> </ul>
		Fruit fly	<ul style="list-style-type: none"> <li>- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.</li> </ul>
<b>Citrus</b>	Nursery		<ul style="list-style-type: none"> <li>- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.</li> </ul>
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	<ul style="list-style-type: none"> <li>- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.</li> </ul>
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	<ul style="list-style-type: none"> <li>- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.</li> </ul>
			<ul style="list-style-type: none"> <li>- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.</li> </ul>



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”****MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

**Significant past weather for the preceding bi-weekly of  
Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)**

The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4<sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.

**Weather forecast for next five days of Thoubal  
(6<sup>th</sup> to 10<sup>th</sup> August, 2016)**

Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 33 - 35 °C & minimum temp. 23 - 25 °C. Relative humidity may reach upto 100 % (max RH) & 94 % (min RH). The average wind speed may be 0-2 km/hr. Wind direction may be South-Westerly during the next five days.

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”****MANIPUR BULLETIN****5<sup>th</sup> August, 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 6<sup>th</sup> to 10<sup>th</sup> August, 2016 as below:

**Significant past weather for the preceding bi-weekly of  
Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> August, 2016)**

The sky remained partly cloudy to mainly cloudy but mainly clear during morning hours of 4<sup>th</sup> Aug, 16. No rainfall was recorded during past three days. Maximum temperature range observed was 30.4 to 33.2 °C, range of minimum temperature observed was 21.6 to 23.0 °C, mean relative humidity observed in morning and afternoon were 83.67 % and 70.67 % respectively. The average wind speed range was 4.9 to 5.7 km/hr.

**Weather forecast for next five days of Senapati  
(6<sup>th</sup> to 10<sup>th</sup> August, 2016)**

Likely to have heavy rainfall at isolated places over Manipur upto Wednesday. Sky will remain mainly cloudy to overcast with maximum temp. 28 - 31 °C & minimum temp. 19 - 21 °C. Relative humidity may reach upto 100 % (max RH) & 92 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be South-Westerly during the next five days.

**Weather Warning****Rainfall at most places very likely over northeastern states****Weather Outlook for subsequent 2 days from 10<sup>th</sup> to 12<sup>th</sup> August, 2016****Rainfall at most places very likely over northeastern states**

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Main kharif rice</b>	Tillering stage		<ul style="list-style-type: none"> <li>- One hand weeding may be done after rain at 20-30 days after transplanting.</li> <li>- After rain, drain out the water and apply 33kg of urea/ ha as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Ridges should be well constructed to maintain water level of 5-8cm.</li> </ul>
		Thrips & Leaf folder	➤ Spray Lambdacythrin 5% EC @ 15 ml/ 15 lit of water after rain.
<b>Kharif maize</b>	Cob formation to Maturity and Harvesting		<ul style="list-style-type: none"> <li>➤ Weeding may be done on sunny days to control weeds/ insect-pest.</li> <li>➤ Maintain proper drainage system to avoid water logging.</li> <li>➤ Mature cobs may be harvested.</li> </ul>
<b>Soybean/ Groundnut</b>	Vegetative		<ul style="list-style-type: none"> <li>➤ Maintain proper drainage system to avoid water logging</li> <li>➤ Keep the plot clean to avoid hairy caterpillars. Hand weeding should be done after rain at 30-35 days after sowing.</li> <li>➤ For control of red hairy caterpillars in crops at vegetative stage, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 76 EC 0.05% (0.6ml/ lit of water) after rain.</li> </ul>
		Tikka disease in groundnut	➤ Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut after rain.
<b>Storage (seed)</b>			➤ Dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
<b>Horticulture Crops</b>			
* Drain-out excess water from the crop area.			
<b>Early Cauliflower</b>	Nursery		- After rain, prepare raised beds for cauliflower nursery also prepare temporary rain shelter to protect it. Proper drainage may be well constructed. Prepare raised nursery beds. Recommended varieties are: White Shot, White Flash, and Swetha.
<b>Passion fruit</b>	Fruiting to harvesting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture after rain.
		Anthraxnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water after rain.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha after rain.
<b>Citrus</b>	Nursery		- Spray Imidachloprid@2ml/lit of water or <u>Dichlorovos @0.5ml/lit</u> water after rain to prevent insect pest infestation.
<b>King Chilli</b>	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water after rain.
<b>Turmeric/ Ginger</b>	Rhizome formation	Rhizome rot	- To prevent rhizome rot spray Redomil MZ 72 W.P. @ 2 g/ lit of water at 15 days interval for 2-3 times after rain.
			- For grown up plants spray Dithan M45 @ 2 to 2.5 ml/lit of water as prophylactic measures after the rain.



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



Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Do not let animals to graze in fodder fields now, as at the time of sudden growth in fodder after long submergence presence of cyanide has been found.			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"><li>➤ Do not give muddy water as there is chance of <i>colibacillosis</i> during the rainy season.</li><li>➤ Use water sanitizer in drinking water/potassium per magnate (few grains)</li><li>➤ Keep the litter dry &amp; add 2 kg lime powder for 100 sq. ft. area and mix it properly.</li></ul>
		Coccidiosis	<ul style="list-style-type: none"><li>➤ Use Amprolium @1.5g/lit of drinking water for 5-7 days and electrolyte can be associated.</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose.</li></ul>
Sheep/ Goat	All age groups excepts the young ones	Care & management	<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>➤ 21 days after shearing sheep, their bodies should be drenched with Butox @ 2ml/ lit water. Use medicated water for drenching.</li></ul>
		Vaccination	<ul style="list-style-type: none"><li>➤ Vaccinate against sheep/ goat pox and Enterotaxaemia.</li></ul>
		De-worming	<ul style="list-style-type: none"><li>➤ De-worming of animals should be done using Abendazole/Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.</li></ul>
Pig	All age groups except the young ones	Care and management	<ul style="list-style-type: none"><li>➤ Mineral mixture be added in feed @10-20 g/adult animal.</li><li>➤ Treat drinking water with potassium permanganate/ sanitizer.</li><li>➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds</li></ul>
		Mites infestation	<ul style="list-style-type: none"><li>➤ Spray with Skin Heal Spray in sufficient quantity.</li><li>➤</li></ul>
		Deworming	<ul style="list-style-type: none"><li>➤ Give Piperazine liquid @ 10-15ml orally once only.</li></ul>
Cattle	All age groups excepts the young ones	B.Q./ H.S/FMD	<ul style="list-style-type: none"><li>➤ If not already done, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot &amp; Mouth Disease, Enterotoxaemia, etc.</li><li>➤ If the animals are affected by FMD, keep it in a separate enclosure.</li><li>➤ Calves should not be allowed to drink milk from mothers if affected by FMD, it affects heart and cause even death of the calves.</li></ul>
		Endoparasites	<ul style="list-style-type: none"><li>➤ De-worm orally once using Nilzan-F @ 90ml/ 300 kg body weight.</li></ul>
		Care & management	<ul style="list-style-type: none"><li>➤ Food supplements may be given @30-50 gm/animals.</li><li>➤ After the birth of the self the new born must be fed with Colostrum within the first two hours.</li><li>➤ Ensure that the animal sheds remain dry during the monsoon season.</li><li>➤ Lemon grass oil/ fly repellants can be used to keep flies away in the sheds.</li><li>➤ Make arrangements to protect animals from heavy rain/ sun/ excessive heat.</li></ul>
		Milk Fever	<ul style="list-style-type: none"><li>➤ Protect from milk fever by giving daily a mixture of calcium and phosphorus @ 70-100ml.</li></ul>
Fishery:			
Type of Farming	Stage	Management	Agro-metrological advisories
* Encircle fish ponds to avoid escape of fishes during heavy rain period.			
Carp culture	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><li>➤ Encircle the pond with net or bamboo mat as a preventive measure for flood.</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></ul>



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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

			➤ Feed can be fed at 2 times a day.
	Paddy cum fish culture	water	➤ Water depth of the field should be maintained. ➤ 20-40% of the paddy plot can be made as 1.0-1.5m deep trenches. ➤ 1000-3000 fish fingerlings can be stocked in 1 hectare rice field. ➤ Feeding should be done @ 2% body weigh 5t per day.
<b>Integrated Fish Farming</b>	Pig		➤ About 30-40 two months old pigs may be kept for proper fertilization of the one ha pond. Pigs are feed on mash at an average of 1kg/day. Green grasses or animal folder is also provided. Grass with interlocked soil in the root system (sod) is provided once a week to avoid mineral deficiency.
	Duck		➤ 200-400 ducks of 2-3 months old are sufficient to adequately fertilize a 1 ha pond.

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