



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)

During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. **15.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.

Weather forecast for next five days of Churachandpur (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 30.0 – 32.0 °C & minimum temp. 20.0 – 22.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) & 85 % (minimum RH). The average wind speed may be 0-3 km/hr during next five days.

\* *Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat*

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.

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



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)

During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. **15.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.

Weather forecast for next five days of Imphal-East (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 32.0 °C & minimum temp. 21.0 – 23.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) & 85 % (minimum RH). The average wind speed may be 0-3 km/hr during next five days.

\* *Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat*

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
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**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

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Weather forecast for next five days of Imphal-West (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 33.0 °C & minimum temp. 20.0 – 22.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) & 78 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

\* Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.

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



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**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

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Weather forecast for next five days of Senapati (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 28.0 – 30.0 °C & minimum temp. 17.0 – 20.0 °C. Relative humidity may reach a maximum of 99 % (maximum RH) & 79 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

\* Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.

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**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)</u></p>	<p><u>Weather forecast for next five days of Tamenglong (6<sup>th</sup> to 10<sup>th</sup> September, 2014)</u></p>
<p>During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. <b>15.9 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.</p>	<p>There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 32.0 – 33.0 °C &amp; minimum temp. 22.0 – 23.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) &amp; 74 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.</p>

\* Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		<ul style="list-style-type: none"> <li>- Maintain water level of 5-8cm.</li> <li>- Weeding may be done before top dressing.</li> <li>- Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.</li> </ul>
		Gall midge	<ul style="list-style-type: none"> <li>- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.</li> </ul>
		Aphid Leaf folder, plant hopper	<ul style="list-style-type: none"> <li>Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.</li> <li>Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).</li> </ul>
<b>Soybean</b>	Flowering to fruiting and pod formation	<ul style="list-style-type: none"> <li>- Rust</li> <li>- Hairy caterpillar</li> </ul>	<ul style="list-style-type: none"> <li>- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.</li> <li>- Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.</li> <li>- Weeding may be done to avoid hairy caterpillar.</li> </ul>
<b>Groundnut</b>	Pod formation	Tikka disease	<ul style="list-style-type: none"> <li>- Hand weeding should be done to prevent hairy caterpillar and other insect pest.</li> <li>- Spray Carbendazim @ 0.5g / lit of water.</li> </ul>
<b>Blackgram</b>	Vegetative	Hairy caterpillar	<ul style="list-style-type: none"> <li>Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer.</li> <li>- Avoid water logging in and around the crop field.</li> </ul>
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	<ul style="list-style-type: none"> <li>- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.</li> </ul>



**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		<p>- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.</p>

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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)

During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. **15.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.

Weather forecast for next five days of Thoubal (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 30.0 – 32.0 °C & minimum temp. 20.0 – 22.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) & 88 % (minimum RH). The average wind speed may be 0-4 km/hr during next five days.

\* *Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat*

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 6<sup>th</sup> to 10<sup>th</sup> September, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)

During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. **15.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.

Weather forecast for next five days of Ukhrul (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 28.0 – 30.0 °C & minimum temp. 17.0 – 20.0 °C. Relative humidity may reach a maximum of 99 % (maximum RH) & 76 % (minimum RH). The average wind speed may be 2- 3 km/hr during next five days.

\* *Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat*

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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



**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		<p>- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.</p>

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



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)</u></p>	<p><u>Weather forecast for next five days of Bishnupur (6<sup>th</sup> to 10<sup>th</sup> September, 2014)</u></p>
<p>During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. <b>15.9 mm</b> rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.</p>	<p>There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 31.0 – 33.0 °C &amp; minimum temp. 21.0 – 23.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) &amp; 84 % (minimum RH). The average wind speed may be 0-4 km/hr during next five days.</p>

\* Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		<ul style="list-style-type: none"> <li>- Maintain water level of 5-8cm.</li> <li>- Weeding may be done before top dressing.</li> <li>- Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.</li> </ul>
		Gall midge	<ul style="list-style-type: none"> <li>- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.</li> </ul>
		Aphid	<ul style="list-style-type: none"> <li>Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.</li> </ul>
		Leaf folder, plant hopper	<ul style="list-style-type: none"> <li>Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).</li> </ul>
<b>Soybean</b>	Flowering to fruiting and pod formation	<ul style="list-style-type: none"> <li>- Rust</li> <li>- Hairy caterpillar</li> </ul>	<ul style="list-style-type: none"> <li>- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval.</li> <li>- Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.</li> <li>- Weeding may be done to avoid hairy caterpillar.</li> </ul>
<b>Groundnut</b>	Pod formation		<ul style="list-style-type: none"> <li>- Hand weeding should be done to prevent hairy caterpillar and other insect pest.</li> </ul>
		Tikka disease	<ul style="list-style-type: none"> <li>- Spray Carbendazim @ 0.5g / lit of water.</li> </ul>
<b>Blackgram</b>	Vegetative	Hairy caterpillar	<ul style="list-style-type: none"> <li>Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		<ul style="list-style-type: none"> <li>- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer.</li> <li>- Avoid water logging in and around the crop field.</li> </ul>
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	<ul style="list-style-type: none"> <li>- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.</li> </ul>



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



**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
		Powdery Mildew	- Spray Mirador (Azoxystrobin023%) @ 1ml/litre of water or Bayleton @ 7g/15 litre water.
<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
		Deworming	Give Piperazine liquid @ 40 for 100 adult birds (30ml on 1 <sup>st</sup> day and 10ml on 2 <sup>nd</sup> day).
		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		<p>- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.</p>

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**2<sup>nd</sup> September, 2014**

**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> September, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (2<sup>nd</sup> to 4<sup>th</sup> September, 2014)

During past three days sky was partly cloudy to mainly cloudy but mainly clear during morning hours of 29<sup>th</sup> August. **15.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 30.2 – 32.8 °C, range of minimum temperature observed was 20.8 – 22.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 73.3 % respectively. The average wind speed range was 0.3 – 0.4 km/hr.

Weather forecast for next five days of Chandel (6<sup>th</sup> to 10<sup>th</sup> September, 2014)

There may be light to moderate rain upto Wednesday. Sky may be partly cloudy to mainly cloudy with maximum temp. of 32.0 – 34.0 °C & minimum temp. 22.0 – 23.0 °C. Relative humidity may reach a maximum of 99 % (maximum RH) & 81 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

\* Seedling of late variety RC Maniphou 7 is available at ICAR-RC Manipur Centre, Lamphelpat

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Interculture operations/ weeding, application of fertilizer and spray of insecticides/ pesticides may be done before rains.</b>			
<b>Field Crops</b>			
<b>Kharif Rice</b>	Tillering to Panicle initiation		- Maintain water level of 5-8cm. - Weeding may be done before top dressing. - Apply 33 kg Urea/ha at panicle initiation stage after complete removal of water. Irrigate field after 48 hrs of top dressing and maintain water level at 5-8 cm. If there are insect pest infestations avoid fertilizer application.
		Gall midge	- If gall midge infestation is observed then drain out water completely and apply the following : At early stage of gall midge infestation, spray Fipronil @ 2g/ 15 lit water or Thiomethoxam @ 5g/15 lit of water (i.e., 100g of Thiomethoxam per ha). If it is severe then use Forate @ 4kg per sangam.
		Aphid	Spray Fipronil @ 2g/pump or Imidachloprid 17.8 SL @ 7 ml/ 15 litres.
		Leaf folder, plant hopper	Spray Coragen @ 3ml/15 lit of water or Lambdacythothrin @ 15ml/ 15 litre of water (at least three pumps per sangam).
<b>Soybean</b>	Flowering to fruiting and pod formation	- Rust - Hairy caterpillar	- Spray Mancozeb 75% WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval. - Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water. - Weeding may be done to avoid hairy caterpillar.
<b>Groundnut</b>	Pod formation		- Hand weeding should be done to prevent hairy caterpillar and other insect pest.
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water.
<b>Blackgram</b>	Vegetative	Hairy caterpillar	Spray Chloropyriphos 20 EC @ 2.5 ml/ lit of water.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
<b>Ginger/ Turmeric</b>	Rhizome initiation		- Apply Phosphate solubilizing bacteria @ 3-5kg/ acre (1.6 sangam) with compost in soil as bio-fertilizer. - Avoid water logging in and around the crop field.
<b>Turmeric</b>	Rhizome initiation	Taphrina Leaf Blotch and other leaf spot diseases	- For Taphrina Leaf Blotch and other leaf spot diseases apply Trichoderma harzianum @ 5-10gm/ litre water as foliar spray and in soil drenching.



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Tomato</b>	Nursery		- Raise nurseries of onion & tomato under polyhouses.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Land preparation for transplanting		- Prepare main field for transplanting raised cole crops nurseries. - Apply 5 tones (10cart loads) of FYM, 50 kg DAP, 25 Kg MOP as basal dose.
<b>Citrus (Lime/ lemon/ orange)</b>	Nursery	Citrus Psylla	- Spray Imidachloprid 70% W.G. (Admire) @0.5g/ litre of water or Nuvan @ 0.5ml/litre of water.
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<b>French Bean, Broad bean &amp; Pea</b>	Land preparation		Land preparation for sowing of french bean, broad bean and pea may be done. Recommended varieties for French bean are – Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawaii (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<p><b>- Provide clean drinking water to birds and animals. Avoid water logging around the sheds as it may help in mosquito breeding.</b>  <b>- Take up measures to reduce flies and mosquitoes population in and around the birds/ animals sheds.</b></p>			
<b>Poultry</b>	All susceptible age groups (as and when required)	Ranikhet disease	Vaccinate against Ranikhet disease.
		Coccidiosis	Give Amprolium powder @ 2 g/ lit of drinking water for 7days along with glucose.
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		Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.
		Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	Give Albendazole liquid.
<b>Pig</b>	Above 3 months of age (as and when required)	Coccidial infection (Diarrhea)	Ofloxacin tab twice daily for 5 days.
		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
			Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin infection	Apply Himax ointment on the affected portion two times daily.
		Deworming	Give Albendazole liquid.

**Fishery:**

Type of Farming	Stage	Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Grow – out/ nurseries		<p>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m.</p> <p>- Feeds should be provided 2-3 times a day @ 5-10% body weight per day.</p> <p>- Well balanced feed fortified with vitamins and minerals should be provided.</p> <p>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha.</p> <p>- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.</p>
<b>Paddy cum fish culture</b>	Water management		- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.

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