



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**5<sup>th</sup> October, 2012**

**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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Bishnupur (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain cloudy. The maximum temp. is likely to be 24.0 - 27.0 °C. The minimum temp. is likely to be 19.0 - 20.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 91 %. The average wind speed during next five days may reach upto max. value of 6 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.



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<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).



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<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
	7th to 14th week		- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
		Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
<b>Pig</b>	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
		Spraying against ectoparasites (Tick, Lice, etc.)	- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	- Vaccinate with B.Q. & H.S. vaccine @ 20cc sub-cutaneously.

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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### MANIPUR BULLETIN

**5<sup>th</sup> October, 2012**

#### **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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Chandel (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 27.0 - 28.0 °C. The minimum temp. is likely to be 23.0 °C. The RH is likely to remain above 89 % during next five days. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	<ul style="list-style-type: none"> <li>- Spray <i>Carbendazim</i> @ 1.5 g/lit of water</li> <li>- Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.</li> </ul>
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			<ul style="list-style-type: none"> <li>- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days.</li> <li>- Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.</li> </ul>
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		<ul style="list-style-type: none"> <li>- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it.</li> <li>- Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting.</li> <li>- Desirable seed size is 60-80 gm (or an egg size).</li> <li>- Select known variety from reliable sources for commercial cultivation.</li> </ul>



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<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).



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		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
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	7th to 14th week		- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
<b>Pig</b>	Above 3 months of age	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
		Swine Fever	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only. - Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
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<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
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**5<sup>th</sup> October, 2012**

#### **Churachandpur**

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<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (2<sup>nd</sup> to 4<sup>th</sup> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 24.0 - 28.0 °C. The minimum temp. is likely to be 19.0 - 20.0 °C. The RH is likely to remain above 92 % during next five days. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	<ul style="list-style-type: none"> <li>- Spray <i>Carbendazim</i> @ 1.5 g/lit of water</li> <li>- Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.</li> </ul>
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			<ul style="list-style-type: none"> <li>- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days.</li> <li>- Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.</li> </ul>
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		<ul style="list-style-type: none"> <li>- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it.</li> <li>- Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting.</li> <li>- Desirable seed size is 60-80 gm (or an egg size).</li> <li>- Select known variety from reliable sources for commercial cultivation.</li> </ul>



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**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
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**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).





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I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**5<sup>th</sup> October, 2012**

**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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal-East (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 24.0 - 27.0 °C. The minimum temp. is likely to be 19.0 - 20.0 °C. The maximum RH is likely to attain a max value of 99 %. Minimum RH is likely to reach a max of 88 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	<ul style="list-style-type: none"> <li>- Spray <i>Carbendazim</i> @ 1.5 g/lit of water</li> <li>- Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.</li> </ul>
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			<ul style="list-style-type: none"> <li>- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days.</li> <li>- Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.</li> </ul>
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		<ul style="list-style-type: none"> <li>- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it.</li> <li>- Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting.</li> <li>- Desirable seed size is 60-80 gm (or an egg size).</li> <li>- Select known variety from reliable sources for commercial cultivation.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).



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<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
	7th to 14th week		- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
		Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
<b>Pig</b>	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
		Spraying against ectoparasites (Tick, Lice, etc.)	- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	- Vaccinate with B.Q. & H.S. vaccine @ 20cc sub-cutaneously.

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**5<sup>th</sup> October, 2012**

#### **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> October, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (2<sup>nd</sup> to 4<sup>th</sup> October, 2012)</u>	<u>Weather forecast for next five days of Imphal-West (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.	During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 22.0 - 26.0 °C. The minimum temp. is likely to be 18.0 - 19.0 °C. The RH is likely to remain above 90%. The average wind speed during next five days may reach upto max. value of 5 km/hr.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.



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



**“Integrated Agromet Advisory Services”**

<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).





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

Poultry	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
			- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
	7th to 14th week	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
Pig	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			
Cattle / Buffalo	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
		Spraying against ectoparasites (Tick, Lice, etc.)	- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	- Vaccinate with B.Q. & H.S. vaccine @ 20cc sub-cutaneously.

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**5<sup>th</sup> October, 2012**

**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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Senapati (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 22.0 - 26.0 °C. The minimum temp. is likely to be 18.0 °C. The RH is likely to remain above 88 % during next five days. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.
<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).



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**“Integrated Agromet Advisory Services”**

<b>Cabbage</b>	Nursery raising		<ul style="list-style-type: none"> <li>- Provide temporary shed to protect from rain</li> <li>- Raise the bed, use 1.5 to 2.0 m<sup>2</sup> area for 10 gm packet seed.</li> <li>- Avoid over-crowding of seeds.</li> </ul>
	Vegetative to maturity (early variety crop of cabbage)	Plutella/ Daimond Black Moth	<ul style="list-style-type: none"> <li>- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage.</li> <li>- In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.</li> </ul>
		Cut-worm	<ul style="list-style-type: none"> <li>- Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha.</li> </ul>
<b>Citrus</b>	Field condition	Trunk borer	<ul style="list-style-type: none"> <li>- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.</li> <li>- Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.</li> </ul>
	Field condition and nursery	Leaf Miner	<ul style="list-style-type: none"> <li>- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.</li> </ul>

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

Type of Farming	Agro-metrological advisories
Carp culture	<ul style="list-style-type: none"> <li>• To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>• To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>• Pond water depth should be maintained at 1.0-1.5m.</li> <li>• Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>• Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>• Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	<ul style="list-style-type: none"> <li>- Deworm against Fascioliasis using Oxyclozanide @ 15 mg/ kg body weight.</li> <li>- Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).</li> </ul>
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	<ul style="list-style-type: none"> <li>- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.</li> </ul>
		Spraying against ectoparasites (Tick, Lice, etc.)	<ul style="list-style-type: none"> <li>- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.</li> </ul>
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	<ul style="list-style-type: none"> <li>- Vaccinate with B.Q. &amp; H.S. vaccine @ 20cc sub-cutaneously.</li> </ul>



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



**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
			- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
	7th to 14th week	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
<b>Pig</b>	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			

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 Scientist i/c, AMFU- Imphal Unit



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Manipur Centre, Lamphelpat, Imphal - 795 004**



## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**5<sup>th</sup> October, 2012**

#### **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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Tamenglong (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 25.0 - 30.0 °C. The minimum temp. is likely to be 21.0 - 22.0 °C. The RH is likely to remain above 89 % during next five days. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer ( <i>Carbendazim</i> + <i>Mencozeb</i> ) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.



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

<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).





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<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
	7th to 14th week		- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
<b>Pig</b>	Above 3 months of age	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
	All susceptible age groups	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
		Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination.			
* Vaccinate against FMD to all the animals above 3 months age.			
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
		Spraying against ectoparasites (Tick, Lice, etc.)	- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	- Vaccinate with B.Q. & H.S. vaccine @ 20cc sub-cutaneously.

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit



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## “Integrated Agromet Advisory Services”

### MANIPUR BULLETIN

**5<sup>th</sup> October, 2012**

#### **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> October, 2012 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> October, 2012)</u></p> <p>During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.</p>	<p><u>Weather forecast for next five days of Thoubal (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u></p> <p>During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 24.0 - 27.0 °C. The minimum temp. is likely to be 19.0 - 20.0 °C. The maximum RH is likely to attain a max value of 98 %. Minimum RH is likely to reach a max of 89 %. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Groundnut</b>	Pod maturity		- Wait for sun and harvest.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.



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**“Integrated Agromet Advisory Services”**

<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Onion</b>	Nursery		- Nursery may be raised in fertile and raised beds. - 100 gm seeds may be sown at 5 m <sup>2</sup> area. - Avoid overcrowding of seeds and also from attack of insects.
<b>Vegetables</b>	Nursery	Aphid	- If incidence of aphid is observed, apply Neem Seed Kernel Extract-5%.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).
<b>Cabbage / Cauliflower/ Broccoli</b>	Nursery raising		- Provide temporary shed to protect from rain - Raise the bed, use 1.5 to 2.0 m <sup>2</sup> area for 10 gm packet seed. - Avoid over-crowding of seeds.
	Vegetative to maturity (early variety crop of cabbage & cauliflower)	Plutella/ Daimond Black Moth	- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage. - In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
<b>Citrus</b>	Field condition	Trunk borer	- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud. - Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.
	Field condition and nursery	Leaf Miner	- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>Pond water depth should be maintained at 1.0-1.5m.</li> <li>Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	- Deworm against Fascioliasis using Oxyclonazide @ 15 mg/ kg body weight. - Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).



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**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
			- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
	7th to 14th week	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
<b>Pig</b>	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.
		Spraying against ectoparasites (Tick, Lice, etc.)	- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	- Vaccinate with B.Q. & H.S. vaccine @ 20cc sub-cutaneously.

I. Meghachandra Singh  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**5<sup>th</sup> October, 2012**

**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> October, 2012 as given below:

<u>Significant past weather for the preceding bi-weekly of Imphal- West (2<sup>nd</sup> to 4<sup>th</sup> October, 2012)</u>	<u>Weather forecast for next five days of Ukhrul (6<sup>th</sup> to 10<sup>th</sup> October, 2012)</u>
During the past three days the sky was mainly cloudy to cloudy. 12.8 mm rainfall was recorded during past three days. Maximum temperature range observed was 25.2 – 29.8 °C, range of minimum temperature observed was 20.9– 21.5 °C, mean relative humidity observed in morning and afternoon were 91.0 % and 83.3 % respectively. The average wind speed range was 1.7 – 5.9 km/hr.	During next five days, there is likely to have light to moderate rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 22.0 - 26.0 °C. The minimum temp. is likely to be 17.0 - 18.0 °C. The RH is likely to remain above 90 % during next five days. The average wind speed during next five days may reach upto max. value of 3 km/hr.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rice</b>	Grain filling to maturity stage	Grass hopper	- Slant the panicles with bamboo (pou namba) in those fields in which the crop is in maturity stage. This practice is helpful to control grass hopper infestation.
<b>Soybean</b>	Pod formation to pod maturity	<ul style="list-style-type: none"> <li>• Rust</li> <li>• Hairy caterpillar &amp; other leaf eating insects</li> </ul>	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - Spray <i>Chloropyrifos 20 EC</i> @ 2ml/litre of water.
<b>Blackgram</b>	Vegetative		- In August sown crops, if leaf spot disease is observed then spray Carbendazim @ 0.5g/lit of water.
<b>Storage</b>			- To prevent the infestation of pest/ fungi in stored grains or attack of rodents, proper care must be taken. Provide proper ventilation or sun dry the bags/ grains on sunny days. - Seeds of crops like maize, rapeseed, etc. must be stored in RC-seed bins after proper drying. Check for germination of seeds. Clean and dry the seeds.
<b>Horticulture Crops</b>			
<b>Potato</b>	Planting/ land preparation		- Go for land preparation/ planting after this wet spell, when the soil condition will be favourable for it. - Treat the seeds with Sixer (Carbendazim + Mencozeb) @ 2 gm/lit of water for ½ hour and let it dry in shed before planting. - Desirable seed size is 60-80 gm (or an egg size). - Select known variety from reliable sources for commercial cultivation.
<b>Pea</b>	Land preparation and sowing		- Sowing of early variety (Arkel, Azad Pea) may be started after this wet spell. Avoid sowing in wet area. Let the soil dry upto 6 inch depth. - Treat the seeds with Bavistin @ 2.5 mg/ lit of water before sowing.
<b>Tree bean</b>		Trunk borer	-Apply DAP @ 200g + 100g MOP along with Carbofuran 3G @ 100-300 gm per plant in the root zone of tree bean (dose depends on the age of the plant).



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**“Integrated Agromet Advisory Services”**

<b>Cabbage</b>	Nursery raising		<ul style="list-style-type: none"> <li>- Provide temporary shed to protect from rain</li> <li>- Raise the bed, use 1.5 to 2.0 m<sup>2</sup> area for 10 gm packet seed.</li> <li>- Avoid over-crowding of seeds.</li> </ul>
	Vegetative to maturity (early variety crop of cabbage)	Plutella/ Daimond Black Moth	<ul style="list-style-type: none"> <li>- Spray Dichlorovos 76 EC @ 0.5 ml/ lit of water if Plutella (Daimond Black Moth) is observed in the crop in vegetative sage.</li> <li>- In cauliflower that is in harvesting stage, hand picking is advised if Plutella/ Daimond Black Moth are seen.</li> </ul>
		Cut-worm	<ul style="list-style-type: none"> <li>- Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha.</li> </ul>
<b>Citrus</b>	Field condition	Trunk borer	<ul style="list-style-type: none"> <li>- Clean the bore holes of the borer infested trunk with a iron wire and insert a cotton swab soaked in petrol or inject Dichlorovos @ 2 ml/lit and plug with mud.</li> <li>- Paste the trunk with Bordeaux paste (1kg Copper Sulphate + 1 kg lime + 10 lit of water) upto 3-4 feet from the ground.</li> </ul>
	Field condition and nursery	Leaf Miner	<ul style="list-style-type: none"> <li>- Alternative sprays of Imidacloprid 17.8 SL @ 1ml/ lit of water and Fipronil @ 1ml/ lit of water.</li> </ul>

**Fisheries**

\* Ponds should be free from unwanted vegetation and insects

<b>Type of Farming</b>	<b>Agro-metrological advisories</b>
Carp culture	<ul style="list-style-type: none"> <li>• To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.</li> <li>• To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.</li> <li>• Pond water depth should be maintained at 1.0-1.5m.</li> <li>• Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.</li> <li>• Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran &amp; oil cake powder in the ratio 1:1 fortified with 1-2 % mineral mixture can be used as supplementary feed.</li> <li>• Regular checking of fish growth / incidence of diseases etc. should be done by netting.</li> </ul>

**Animal Sciences**

<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Goat/ Sheep</b>	All susceptible age groups	Endoparasite	<ul style="list-style-type: none"> <li>- Deworm against Fascioliasis using Oxyclozoxide @ 15 mg/ kg body weight.</li> <li>- Give Tetramizole hydrochloride @ 15mg/kg body weight (single dose).</li> </ul>
<b>Cattle / Buffalo</b>	All age groups except three months or below	Deworming against parasites (Amphistomes, Fascioliasis)	<ul style="list-style-type: none"> <li>- Deworm using liq. Tolzan-F @ 10 mg/ kg body weight or 30 ml/ kg body weight.</li> </ul>
		Spraying against ectoparasites (Tick, Lice, etc.)	<ul style="list-style-type: none"> <li>- Use Butox @ 2 ml/lit of water while brushing the animal and spray the solution twice in a week.</li> </ul>
		Vaccination against Black leg/B.Q., Haemorrhagic Septicemia and FMD	<ul style="list-style-type: none"> <li>- Vaccinate with B.Q. &amp; H.S. vaccine @ 20cc sub-cutaneously.</li> </ul>





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**“Integrated Agromet Advisory Services”**

<b>Poultry</b>	All susceptible age groups	Endoparasite	- Deworm with Piperazine hexahydrate @ 50ml /100 birds in drinking water once every month. - Before and after deworming administer Brotone(liq.) @ 5-10 ml/100 birds.
		Coccidiosis	- Administer Coximar @ 3g/5 lit of water as preventive measure against Coccidiosis for 4 days.
		Ranikhet	- Vaccinate with strain live vaccine @ one drop on eyes or nostril. at 7th day. - give Lasota strain at 10-12 weeks - give Ranikhet (ND) killed vaccine (0.2 ml intra-muscularly) - Give R2B vaccine at the age of 45-60 days @0.5 ml (intra-muscularly).
			- Provide Calicare @ 40-50 ml for 100 birds. - Mix lime powder @ 1 kg/100sq.ft. area thoroughly in litter. - Keep feed in dry place.
	7th to 14th week	Fowl Pox	- Vaccinate 6-7 wks. and 14 wks. old birds. - Apply Iodine tincture/ Betadine liq. on pox growth daily.
<b>Pig</b>	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
		Swine Fever	- Vaccinate against Swine Fever after 3 months of age.
	All susceptible age groups	Coccidiosis	- Advocate Metaprim @ 2g/ 10 kg body weight for 5-7 days. - Use Butox @ 2 ml/lit of water while brushing the animal.
			- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
* De-worming may be done before 15 days of vaccination. * Vaccinate against FMD to all the animals above 3 months age.			

I. Meghachandra Singh  
 Scientist i/c, AMFU- Imphal Unit