



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Bishnupur (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 20.0 - 25.0 °C. The minimum temp. is likely to be 17.0 - 20.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 97 %. 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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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Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifhos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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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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).
	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.
Pig	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.
Cattle / Buffalo	All age groups except three months or below		- Give Osteovet (liq.) @ 25 ml twice a day to the mother pig. - Give Sharcoferol vet @ 10 ml once daily.
		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.

* 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



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MANIPUR BULLETIN

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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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Chandel (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 25.0 - 28.0 °C. The minimum temp. is likely to be 22.0 - 23.0 °C. The RH is likely to remain above 84 % 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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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Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifhos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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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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.
			- 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.			
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.

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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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 22.0 - 27.0 °C. The minimum temp. is likely to be 19.0 - 20.0 °C. The RH is likely to remain above 87 %. 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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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Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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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Pig	Above 3 months of age	Endoparasitic	- De-worm using Albendazole @ 1 ml/3 kg body weight orally once only.
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* 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.
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Imphal-East

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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
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Tree bean		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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Manipur Centre, Lamphelpat, Imphal - 795 004



“Integrated Agromet Advisory Services”

Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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
Manipur Centre, Lamphelpat, Imphal - 795 004



“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).
	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.
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.
			- 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.			
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



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal-West (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy 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 16.0 -18.0 °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.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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).



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



“Integrated Agromet Advisory Services”

Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifhos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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
Manipur Centre, Lamphelpat, Imphal - 795 004



“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).
	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.
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.
			- 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.			
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



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Senapati (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 18.0 - 24.0 °C. The minimum temp. is likely to be 16.0 - 18.0 °C. The RH is likely to remain above 87 % during next three days then decrease thereafter. 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Tree bean		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).
Potato	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).
Pea	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 <i>Bavistin</i> @ 2.5 mg/ lit of water before sowing.



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Manipur Centre, Lamphelpat, Imphal - 795 004



“Integrated Agromet Advisory Services”

Cabbage	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
Citrus	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

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

Animal Sciences

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



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



“Integrated Agromet Advisory Services”

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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Tamenglong (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy. The maximum temp. is likely to be 22.0 - 29.0 °C. The minimum temp. is likely to be 21.0 - 22.0 °C. The RH is likely to remain above 87 %. 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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).



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



“Integrated Agromet Advisory Services”

Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifhos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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
Manipur Centre, Lamphelpat, Imphal - 795 004



“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).
	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.
Pig	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.
* 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.

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“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Thoubal (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain cloudy. The maximum temp. is likely to be 20.0 - 25.0 °C. The minimum temp. is likely to be 17.0 - 20.0 °C. The maximum RH is likely to attain a max value of 100 %. Minimum RH is likely to reach a max of 98 %. 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Groundnut	Pod maturity		- Wait for sunny day and harvest. Excess water must be drained out from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Onion	Nursery		- Nursery raising may be started after this wet spell. - Raised beds with fertile soil and bright sun shine. Also sterilize the bed to avoid damping off. - 2.5 kg seeds are sufficient for transplanting 0.25 hectare or a sangam. And 15-20 m ² area is required for 2.5 kg seeds.
Early Cauliflower	Harvesting		Use neem based pesticides or any other bio pesticides if <i>Plutella</i> (Diamond Black Moth) is seen attacking the curd or hand picking is advised.
Tree bean		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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Potato	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).
Pea	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.
Cabbage / Cauliflower/ Broccoli	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifhos (1.5%) dust</i> @25 kg /ha.
Capsicum	Nursery		- Raise nursery for off – season production. -Treat the bed to avoid from termites/ ants and soil borne diseases.
Citrus	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 Fripronil @ 1ml/ lit of water.
Fisheries			
* Ponds should be free from unwanted vegetation and insects			
Type of Farming		Agro-metrological advisories	
Carp culture		<ul style="list-style-type: none">To reduce algal bloom/ pollution, apply Agrilime @ 200 kg/ha.To increase oxygen level in culture pond, drain out half of pond water and replace that with fresh and clean water.Pond water depth should be maintained at 1.0-1.5m.Net fencing should be done to prevent escape of fish during overflow of water with heavy rain.Feed should be provided 2-3 times @ 3-5% body weight per day. A mixture of rice bran & oil cake powder in the ratio 1:1fortified with 1-2 % mineral mixture can be used as supplementary feed.Regular checking of fish growth / incidence of diseases etc. should be done by netting.	
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat/ Sheep	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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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.
			- 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.			
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.

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“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th 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 10th to 14th October, 2012 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal- West (5th to 8th October, 2012)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy but partly cloudy during 6th afternoon hours. 18.9 mm rainfall was recorded during past four days. Maximum temperature range observed was 24.3 – 33.3 °C, range of minimum temperature observed was 20.4 – 21.0 °C, mean relative humidity observed in morning and afternoon were 88.0 % and 77.0 % respectively. The average wind speed range was 1.5 – 2.8 km/hr.</p>	<p><u>Weather forecast for next five days of Ukhrul (10th to 14th October, 2012)</u></p> <p>During next five days, there is likely to have moderate to heavy rainfall. The sky is likely to remain mainly cloudy to cloudy but partly cloudy on 14th Oct. The maximum temp. is likely to be 18.0 - 24.0 °C. The minimum temp. is likely to be 16.0 - 17.0 °C. The RH is likely to remain above 84 % during next three 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
Field Crops			
Rice	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. - Provide proper drainage in and around the crop field.
Soybean	Pod maturity	- Rust	- Spray <i>Carbendazim</i> @ 1.5 g/lit of water - drain out excess water from crop field to avoid water logging problem.
Blackgram	Vegetative		- Weeding may be done. - In August sown crops, if leaf spot disease is observed then spray <i>Carbendazim</i> @ 0.5g/lit of water.
Storage			- 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.
Horticulture Crops			
Tree bean		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).
Potato	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).
Pea	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.



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Cabbage	Nursery raising		- For continuous harvest, nursery may be raised as 2 nd and 3 rd crop after this wet spell. - Provide temporary shed using bamboo, dry twigs/ paddy straw or polythene to protect nursery from rain.
		Cut-worm	- Apply <i>Chloropyrifos (1.5%) dust</i> @25 kg /ha.
Citrus	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

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

Animal Sciences

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



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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.
			- 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.			
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.

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