



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Chandel (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 21.0 - 22.0 °C & minimum temp. 2.0 - 4.0 °C. Relative Humidity may reach a maximum value of 97 % (maximum RH) & 44 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Churachandpur (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 22.0 - 23.0 °C & minimum temp. 3.0 - 4.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 45 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Imphal-East**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)</u></p> <p>During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal - East (11<sup>th</sup> to 15<sup>th</sup> January, 2014)</u></p> <p>There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 19.0 - 20.0 °C &amp; minimum temp. 2.0 - 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) &amp; 70 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.





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<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
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**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Imphal-West**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

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Weather forecast for next five days of Imphal - West (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 20.0 - 21.0 °C & minimum temp. 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 73 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
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<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
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<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
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		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Senapati (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 19.0 - 20.0 °C & minimum temp. 2.0 - 3.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 70 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Tamenglong (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 20.0 - 21.0 °C & minimum temp. 2.0 - 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 69 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Thoubal (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 21.0 - 22.0 °C & minimum temp. 2.0 - 4.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 54 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.





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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Ukhrul (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 18.0 - 20.0 °C & minimum temp. 1.0 - 3.0 °C. Relative Humidity may reach a maximum value of 97 % (maximum RH) & 54 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> January, 2014**

**Bishnupur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 11<sup>th</sup> to 15<sup>th</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (7<sup>th</sup> to 9<sup>th</sup> January, 2014)

During the past three days the sky was clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was 21.6 – 22.8 °C, range of minimum temperature observed was 1.1 – 4.2 °C, mean relative humidity observed in morning and afternoon were 90.0 % and 41.6 % respectively. The average wind speed range was 1.1 – 4.2 km/hr.

Weather forecast for next five days of Bishnupur (11<sup>th</sup> to 15<sup>th</sup> January, 2014)

There may be light rain from Saturday. Sky may be clear to partly cloudy with maximum temp. of 21.0 - 22.0 °C & minimum temp. 2.0 - 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 55 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative to flowering		- Irrigation may be given. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Light irrigation may be given if the soil is dry.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Sowing to vegetative		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Thinning of mustard or pea may be done in vegetative stage.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Vegetable crops (French bean, Pea, etc.)</b>	Land preparation	Pre-mature wilting	To avoid pre-mature wilting, soil must be exposed to sun after proper ploughing. As prophylactic measure, a dormant spray of Bordeaux mixture (1:1:100) using 100 litres of water / sangam at least once in this week and another after 20-25 days. - Treat seed with Carbendazim@ 2-3g/ kg seed.
<b>Potato</b>	Vegetative		- If aphid is observed in small patches, wash off it with plain water but if it is severe, spray Cypermethrin 20 E.C. @ 1ml/ litre of water or Nuvan @ 0.5ml/litre of water. - Give light irrigation to attain optimum soil moisture. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
<b>Cucurbits</b>	Nursery		- Nurseries of bitter gourd, cucumber, sponge gourd, bottle gourd, pumpkin, etc. may be done under polyhouse.
<b>Tomato</b>	Vegetative to flowering		- Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.



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			- Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag.
<b>Onion/ Garlic</b>	Vegetative		- Light irrigation may be given if the soil is dry.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	- Add Supercox @ 10g in 10 litres of drinking water for 2-3 days and repeat the same after two days break. - Mix Kampro-H @ 500g in 1 ton of feed.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30 days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	Deworming may be done using Piperazine liq. @ 40ml for 100 birds (layers) once only.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Contagious Caprine Pluero-pneumonia (CCPP) in goat	- Vaccinate against Contagious Caprine Pluero-pneumonia intra-dermally.
		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
		Endoparasite	- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever & FMD	- Vaccinate against swine fever & FMD after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	B.Q. & H.S.	- Vaccinate against B.Q. & H.S.
		Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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