



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Imphal-East (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 20.0 – 22.0 °C & minimum temp. 4.0 – 6.0 °C. Relative humidity may reach upto 100 % (maximum RH) & 62 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracel @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

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



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Imphal-West (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to mainly cloudy with maximum temp. of 22.0 – 23.0 °C & minimum temp. 3.0 – 5.0 °C. Relative humidity may reach upto 99 % (maximum RH) & 59 % (minimum RH). The average wind speed may be 2-4 km/ hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracel @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

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



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**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Senapati (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 17.0 – 21.0 °C & minimum temp. 2.0 – 5.0 °C. Relative humidity may reach upto 100 % (maximum RH) & 58 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Citrus	For nursery	leaf minor	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		Leaf eating caterpillar, thrips & mite.	- Spray Confidor @ 0.5 ml/ lit of water.
Ginger	Harvesting		- Avoid bruise/ wound to the rhizome while harvesting. - Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed wile storing.





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**“Integrated Agromet Advisory Services”**

			- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking. - 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 A, vitamin B & vitamin C.
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
Sheep/ Goat	Above 3 months of age (as and when required)	Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		F.M.D.	- Vaccinate against F.M.D.
		Deworming	- Give Albomac suspension @ 5ml per adult.
Pig	Above 3 months of age (as and when required)	Skin infection	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		Deworming	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Deworming	Deworm using TolzanF @ 100ml/300kg body weight.
		F.M.D.	- Vaccinate against F.M.D.
		Ticks/ Wounds	Topicure spray may be used twice daily on the affected parts.
<b>Fishery:</b>			
Type of Farming	Stage & Management	Agro-metrological advisories	
Carp/ Catfish culture	Harvesting and stock maintenance	<ul style="list-style-type: none"><li>- Fish harvesting can be done.</li><li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li><li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li><li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li><li>- Well balanced feed fortified with vitamins and minerals should be provided.</li><li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li></ul>	

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**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

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**Weather forecast for next five days of Tamenglong (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 20.0 – 23.0 °C & minimum temp. 6.0 – 8.0 °C. Relative humidity may reach upto 99 % (maximum RH) & 56 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracerl @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Thoubal (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 19.0 – 22.0 °C & minimum temp. 4.0 – 8.0 °C. Relative humidity may reach upto 100 % (maximum RH) & 61 % (minimum RH). The average wind speed may be 2 km/ hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracel @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Ukhrul (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 17.0 – 21.0 °C & minimum temp. 2.0 – 5.0 °C. Relative humidity may reach upto 94 % (maximum RH) & 50 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Citrus	For nursery	leaf minor	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		Leaf eating caterpillar, thrips & mite.	- Spray Confidor @ 0.5 ml/ lit of water.
Ginger	Harvesting		- Avoid bruise/ wound to the rhizome while harvesting. - Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed wile storing.



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			- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.
<b>Animal Sciences</b>			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking. - 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 A, vitamin B & vitamin C.
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
Sheep/ Goat	Above 3 months of age (as and when required)	Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		F.M.D.	- Vaccinate against F.M.D.
		Deworming	- Give Albomac suspension @ 5ml per adult.
Pig	Above 3 months of age (as and when required)	Skin infection	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		Deworming	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Deworming	Deworm using TolzanF @ 100ml/300kg body weight.
		F.M.D.	- Vaccinate against F.M.D.
		Ticks/ Wounds	Topicure spray may be used twice daily on the affected parts.
<b>Fishery:</b>			
Type of Farming	Stage & Management	Agro-metrological advisories	
Carp/ Catfish culture	Harvesting and stock maintenance	<ul style="list-style-type: none"><li>- Fish harvesting can be done.</li><li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li><li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li><li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li><li>- Well balanced feed fortified with vitamins and minerals should be provided.</li><li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li></ul>	

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Bishnupur (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 20.0 – 23.0 °C & minimum temp. 5.0 – 8.0 °C. Relative humidity may reach upto 99 % (maximum RH) & 59 % (minimum RH). The average wind speed may be 2 km/ hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracerl @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.





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**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

(I. Meghachandra Singh)  
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**ICAR Research Complex for N.E.H. Region  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Chandel (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 18.0 – 22.0 °C & minimum temp. 3.0 – 7.0 °C. Relative humidity may reach upto 94 % (maximum RH) & 55 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracel @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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



**“Integrated Agromet Advisory Services”**

<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Raising of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays may be done under polyhouse.</li> <li>- Maintain seedlings upto 4-5 leaves stage under the polyhouse.</li> </ul>
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray <i>Monocrotophos</i> @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray <i>Confidor</i> @ 0.5 ml/ lit of water.
<b>Ginger</b>	Harvesting		<ul style="list-style-type: none"> <li>- Avoid bruise/ wound to the rhizome while harvesting.</li> <li>- Sort out healthy rhizomes for seeds and apply neem based pesticides to protect from scale insects. Incorporate dried <i>Lantana camera</i> leaves with the rhizome seed while storing.</li> <li>- There are chances of mouldy and fungal growth in this weather. Hence, treat the seeds with <i>Trichoderma viride</i> @ 20g/ kg seed, cover the heap with gunny bags/ tarpaulin for 2-3 days in an airy shade before storing the seeds.</li> </ul>

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	<b>Coccidiosis</b>	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	<b>Deworming</b>	Deworm using TolzanF @ 100ml/300kg body weight.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Ticks/ Wounds</b>	Topicure spray may be used twice daily on the affected parts.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Harvesting and stock maintenance	<ul style="list-style-type: none"> <li>- Fish harvesting can be done.</li> <li>- Stock fish for next year and for this practices mentioned below may be done in small scale.</li> <li>- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5m.</li> <li>- Feeds should be provided 1-2 times a day @ 2-3 % body weight per day.</li> <li>- Well balanced feed fortified with vitamins and minerals should be provided.</li> <li>- Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.</li> </ul>

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

**MANIPUR BULLETIN**

**30<sup>th</sup> December, 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 31<sup>st</sup> December to 4<sup>th</sup> January, 2014 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (26<sup>th</sup> to 29<sup>th</sup> December, 2014)**

During past four days sky was clear to mainly clear but mainly cloudy during afternoon hours of 27<sup>th</sup> Dec. No rainfall was recorded during past four days. Maximum temperature range observed was 22.5 – 24.2 °C, range of minimum temperature observed was 3.1 – 6.1 °C, mean relative humidity observed in morning and afternoon were 86.8 % and 49.5 % respectively. The average wind speed range was 1.2 – 1.6 km/hr.

**Weather forecast for next five days of Churachandpur (31<sup>st</sup> December to 4<sup>th</sup> January, 2014)**

There may be light rain at isolated places on Thursday. Sky will be partly cloudy to cloudy with maximum temp. of 19.0 – 23.0 °C & minimum temp. 4.0 – 7.0 °C. Relative humidity may reach upto 99 % (maximum RH) & 60 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days \* 0830 hours IST of 2<sup>nd</sup> January, 2014**

Fog would occur at most places over Manipur during next 2 days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
Rapeseed/ mustard	Vegetative to flowering		- Top dress with Urea @ 32.5 kg/ha at 30 days after sowing.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses (Field pea/ Lentil)	Vegetative		- If facility is available give irrigation to keep soil moist during vegetative stage for better yield.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid on the infected patches only. - For organic control against aphid, sprays that consist of Azadirachtin, Neem oil or Pyrethrin may be used.
Rabi maize	Sowing to vegetative		- Rabi maize may be sown as intercrop with potato or pulses. Ridges along east-west direction may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - Give light irrigation.
Storage			- Clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
<b>Horticulture Crops</b>			
Cauliflower, Cabbage & Broccoli	Transplanting		After preparation for transplanting, 850 gm Urea, 2 kg DAP and 1kg MOP along with 40 kg FYM should be incorporated with the soil in an area of 100 m <sup>2</sup> and another 850 g Urea may be top dressed at head/ curd formation stage. Transplant at a spacing of 60 cm x 60 cm for hybrid varieties of cabbage (like Rareball, Green Hero) and cauliflower (White Flash, Sweetha).
	Head formation stage to harvesting	Plutella, Daimond, Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water at 7 days interval.
		Leaf eating caterpillar	Spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
			Regular weeding, inter-culture & watering at this stage is advised for good yield.
Cauliflower	Curd formation stage	Whip tail and Chlorosis	- Spray Tracel @ 5g/ litre of water if leaves fail to develop normally/ curl towards the terminal end or chlorosis (whitening/ yellowing of leaves) is observed.



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Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
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		<b>Management</b>	<ul style="list-style-type: none"> <li>- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.</li> <li>- Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>- Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin A, vitamin B &amp; vitamin C.</li> </ul>
			As the temperature is becoming low during night time protect birds from cold by using polythene sheet or hessian cloth.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	<b>Ectoparasite</b>	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
		<b>F.M.D.</b>	- Vaccinate against F.M.D.
		<b>Deworming</b>	- Give Albomac suspension @ 5ml per adult.
<b>Pig</b>	Above 3 months of age (as and when required)	<b>Skin infection</b>	Give Ivermectin (Indectin tab.) @ 10mg/33kg body weight.
		<b>Deworming</b>	- Deworm using Piperazine citrate @ 30 ml per adult animal once.
		<b>Ticks</b>	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.
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