



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Bishnupur (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 25.0 – 26.0 °C & minimum temp. 6.0 – 7.0 °C. Relative humidity may reach upto 80 % (maximum RH) & 26 % (minimum RH). The average wind speed may be 4-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
<b>Potato</b>	Tuber formation to maturity		- For seed purpose: - Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll. - Maturity days should be strictly maintained as per variety. - Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	- Stock fish for next season and for this practices mentioned below may be done in small scale. - Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5 m. - Feeds should be provided 1-2 times a day @ 2-3% body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.

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



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Chandel (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 24.0 – 25.0 °C & minimum temp. 5.0 – 7.0 °C. Relative humidity may reach upto 84 % (maximum RH) & 29 % (minimum RH). The average wind speed may be 4-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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<b>Onion/ Garlic</b>	Bulb formation		<ul style="list-style-type: none"> <li>- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase.</li> <li>- If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.</li> </ul>
<b>Potato</b>	Tuber formation to maturity		<ul style="list-style-type: none"> <li>- For seed purpose:               <ul style="list-style-type: none"> <li>- Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll.</li> <li>- Maturity days should be strictly maintained as per variety.</li> </ul> </li> <li>- Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.</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)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	<ul style="list-style-type: none"> <li>- Stock fish for next season 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 - 1.5 m.</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**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Churachandpur (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 25.0 – 26.0 °C & minimum temp. 6.0 – 8.0 °C. Relative humidity may reach upto 85 % (maximum RH) & 27 % (minimum RH). The average wind speed may be 4-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		<ul style="list-style-type: none"> <li>Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.</li> </ul>
<b>Mango</b>	Flowering	Leaf Hopper	<ul style="list-style-type: none"> <li>Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.</li> </ul>
		Stone Weevil	<ul style="list-style-type: none"> <li>Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.</li> </ul>
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		<ul style="list-style-type: none"> <li>- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase.</li> <li>- If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.</li> </ul>
<b>Potato</b>	Tuber formation to maturity		<ul style="list-style-type: none"> <li>- For seed purpose:               <ul style="list-style-type: none"> <li>- Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll.</li> <li>- Maturity days should be strictly maintained as per variety.</li> </ul> </li> <li>- Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.</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)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	<ul style="list-style-type: none"> <li>- Stock fish for next season 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 - 1.5 m.</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**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Imphal-East (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 23.0 – 26.0 °C & minimum temp. 6.0 – 8.0 °C. Relative humidity may reach upto 94 % (maximum RH) & 24 % (minimum RH). The average wind speed may be 2-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
<b>Potato</b>	Tuber formation to maturity		- For seed purpose: - Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll. - Maturity days should be strictly maintained as per variety. - Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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 intradermally.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	- Stock fish for next season and for this practices mentioned below may be done in small scale. - Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5 m. - Feeds should be provided 1-2 times a day @ 2-3% body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Imphal-West (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 24.0 – 26.0 °C & minimum temp. 5.0 – 8.0 °C. Relative humidity may reach upto 92 % (maximum RH) & 25 % (minimum RH). The average wind speed may be 2-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
<b>Potato</b>	Tuber formation to maturity		- For seed purpose: - Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll. - Maturity days should be strictly maintained as per variety. - Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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 intradermally.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	- Stock fish for next season and for this practices mentioned below may be done in small scale. - Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5 m. - Feeds should be provided 1-2 times a day @ 2-3% body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Senapati (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 23.0 – 25.0 °C & minimum temp. 3.0 – 5.0 °C. Relative humidity may reach upto 98 % (maximum RH) & 24 % (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>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		<ul style="list-style-type: none"> <li>Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.</li> </ul>
<b>Mango</b>	Flowering	Leaf Hopper	<ul style="list-style-type: none"> <li>Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.</li> </ul>
		Stone Weevil	<ul style="list-style-type: none"> <li>Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.</li> </ul>
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		<ul style="list-style-type: none"> <li>- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase.</li> <li>- If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.</li> </ul>
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	<ul style="list-style-type: none"> <li>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.</li> <li>2. R<sub>2</sub>B vaccine of 8-9 weeks of age group birds (layers).</li> <li>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).</li> </ul>
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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>			
<b>Type of Farming</b>	<b>Stage &amp; Management</b>	<b>Agro-metrological advisories</b>	
<b>Carp/ Catfish culture</b>	Stock maintenance	<ul style="list-style-type: none"> <li>- Stock fish for next season 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 - 1.5 m.</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  
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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Tamenglong (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 25.0 – 26.0 °C & minimum temp. 3.0 – 6.0 °C. Relative humidity may reach upto 88 % (maximum RH) & 25 % (minimum RH). The average wind speed may be 3-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		<ul style="list-style-type: none"> <li>Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.</li> </ul>
<b>Mango</b>	Flowering	Leaf Hopper	<ul style="list-style-type: none"> <li>Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.</li> </ul>
		Stone Weevil	<ul style="list-style-type: none"> <li>Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.</li> </ul>
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
<b>Potato</b>	Tuber formation to maturity		- For seed purpose: - Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll. - Maturity days should be strictly maintained as per variety. - Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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 intradermally.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	- Stock fish for next season and for this practices mentioned below may be done in small scale. - Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5 m. - Feeds should be provided 1-2 times a day @ 2-3% body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.

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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Thoubal (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 24.0 – 25.0 °C & minimum temp. 5.0 – 7.0 °C. Relative humidity may reach upto 78 % (maximum RH) & 25 % (minimum RH). The average wind speed may be 4-6 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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**“Integrated Agromet Advisory Services”**

<b>Onion/ Garlic</b>	Bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
<b>Potato</b>	Tuber formation to maturity		- For seed purpose: - Removal off-types and plants showing mottling, mosaic, crinkle, necrosis and leaf rolling may be followed twice during the growing season. Also, remove plants showing symptoms of purple top roll. - Maturity days should be strictly maintained as per variety. - Blight and leaf spot disease must be controlled by spraying Mancozeb @ 0.2% alternatively with Copper Oxichloride @ 0.3% or with Sixer.

**Animal Sciences**

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days 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).
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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.

**Fishery:**

Type of Farming	Stage & Management	Agro-metrological advisories
<b>Carp/ Catfish culture</b>	Stock maintenance	- Stock fish for next season and for this practices mentioned below may be done in small scale. - Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0 - 1.5 m. - Feeds should be provided 1-2 times a day @ 2-3% body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Green AQ @ 4litre/ ha or lime @ 200kg/ ha. Maintain good quality of pond water.

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**MANIPUR BULLETIN**

**10<sup>th</sup> February, 2015**

**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> February, 2015 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (6<sup>th</sup> to 9<sup>th</sup> February, 2015)**

During past four days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of 6<sup>th</sup> February. No rainfall was recorded during past four days. Maximum temperature range observed was 21.8 – 24.8 °C, range of minimum temperature observed was 3.4 – 5.0 °C, mean relative humidity observed in morning and afternoon were 90.25 % and 40.75 % respectively. The average wind speed range was 1.5 – 2.2 km/hr.

**Weather forecast for next five days of Ukhrul (11<sup>th</sup> to 15<sup>th</sup> February, 2015)**

There may be no rain upto Saturday. Sky will be mainly clear to partly cloudy with maximum temp. of 23.0 – 25.0 °C & minimum temp. 3.0 – 5.0 °C. Relative humidity may reach upto 85 % (maximum RH) & 28 % (minimum RH). The average wind speed may be 4-5 km/ hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Pre-kharif Rice</b>	Land Preparation for nursery		<ul style="list-style-type: none"> <li>- Prepare 700 m<sup>2</sup> area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m<sup>2</sup> at final leveling.</li> <li>- Nursery bed should be well puddled and leveled to avoid uneven stagnation of water.</li> <li>- Seed rate is 60-65kg for a hectare.</li> <li>- Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C.</li> </ul>
<b>Rabi Maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Rapeseed/ mustard</b>	Siliqua formation to maturity	Hairy caterpillar	<ul style="list-style-type: none"> <li>- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.</li> </ul>
<b>Pulses (Field pea/ Lentil)</b>	Fruiting and maturity		<ul style="list-style-type: none"> <li>- If the soil is dry, give light irrigation to maintain moisture status.</li> </ul>
<b>Storage</b>			<ul style="list-style-type: none"> <li>- Dry, clean and store the seeds in RC-seed bins after proper drying of seeds and charcoal. Check for moisture content or weight of seeds. After proper drying, store grains/ seeds in well ventilated godowns.</li> </ul>
<b>Horticulture Crops</b>			
<b>Bhindi</b>	Sowing		Land preparation for sowing bhindi may be done. Spacing is 60cm x 40cm.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.
<b>Cucurbits</b>	Sowing		<ul style="list-style-type: none"> <li>- Continue raising of cucurbits like bitter gourd, bottle gourd, cucumber, sponge gourd, etc. in poly pouch under low cost polyhouse.</li> </ul>
	Transplanting		<ul style="list-style-type: none"> <li>- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold.</li> <li>- Light watering must be done for already transplanted seedlings during morning hours.</li> </ul>



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<b>Onion/ Garlic</b>	Bulb formation		<ul style="list-style-type: none"> <li>- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase.</li> <li>- If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.</li> </ul>
<b>Animal Sciences</b>			
<b>Name of the animal</b>	<b>Growth stage</b>	<b>Disease/ infestation</b>	<b>Agro-meteorological advisories</b>
<b>Poultry</b>	All susceptible age groups (as and when required)	Coccidiosis	Give Coximar @ 2g/lit of drinking water for 5-7 days.
		Ranikhet disease	<ul style="list-style-type: none"> <li>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds.</li> <li>2. R<sub>2</sub>B vaccine of 8-9 weeks of age group birds (layers).</li> <li>3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).</li> </ul>
		Management	- Mix deactivated lime powder @ 2 kg per 100 sq. ft. area in litter material to prevent from caking.
<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.
		Ectoparasite	Use Butox liq. @ 2ml/ 4 litres of water and wash the animal with the solution.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		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.
<b>Cattle / Buffalo/ Mithun</b>	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>			
<b>Type of Farming</b>	<b>Stage &amp; Management</b>	<b>Agro-metrological advisories</b>	
<b>Carp/ Catfish culture</b>	Stock maintenance	<ul style="list-style-type: none"> <li>- Stock fish for next season 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 - 1.5 m.</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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