



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



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Bishnupur (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 22.0 °C & minimum temp. 1.0 – 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 36 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray Confidor @ 0.5 ml/ lit of water.
	For grown up trees	<b>Powdery mildew</b>	If <b>powdery mildew</b> is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost. - Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

I. Meghachandra Singh  
 Scientist i/c,  
 Gramin Krishi Mausam Seva (GKMS)



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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Chandel (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 21.0 - 22.0 °C & minimum temp. 0.0 – 1.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 45 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	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.
	For grown up trees	Powdery mildew	If powdery mildew is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost. - Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

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During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Churachandpur (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 22.0 - 23.0 °C & minimum temp. 2.0 – 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 36 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray Confidor @ 0.5 ml/ lit of water.
	For grown up trees	<b>Powdery mildew</b>	If <b>powdery mildew</b> is seen in the orchard, harvest mature fruits and spray Bayleton @ 7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.





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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		<ul style="list-style-type: none"> <li>- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost.</li> <li>- Proper staking should be provided to support during fruiting phase.</li> </ul>
	Sowing		<ul style="list-style-type: none"> <li>- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field.</li> <li>- Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m<sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.</li> <li>- Sow seeds @ 10g/ 3m<sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.</li> </ul>

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	<ul style="list-style-type: none"> <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 B &amp; vitamin A.</li> <li>- Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed.</li> <li>- To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.</li> </ul>
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

I. Meghachandra Singh  
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Manipur Centre, Lamphelpat, Imphal - 795 004**



**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

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During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Imphal - East (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 20.0 - 22.0 °C & minimum temp. 0.0 – 2.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 31 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @ 2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray Confidor @ 0.5 ml/ lit of water.
	For grown up trees	<b>Powdery mildew</b>	If <b>powdery mildew</b> is seen in the orchard, harvest mature fruits and spray Bayleton @ 7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		<ul style="list-style-type: none"> <li>- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost.</li> <li>- Proper staking should be provided to support during fruiting phase.</li> </ul>
	Sowing		<ul style="list-style-type: none"> <li>- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field.</li> <li>- Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m<sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.</li> <li>- Sow seeds @ 10g/ 3m<sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.</li> </ul>

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	<ul style="list-style-type: none"> <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 B &amp; vitamin A.</li> <li>- Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed.</li> <li>- To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.</li> </ul>
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Imphal - West (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 21.0 - 22.0 °C & minimum temp. -1.0 – 2.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 33 % (minimum RH). The average wind speed may be 2-5 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	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.
	For grown up trees	Powdery mildew	If powdery mildew is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost. - Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Senapati (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 21.0 °C & minimum temp. -2.0 – 1.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 33 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	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.
	For grown up trees	Powdery mildew	If powdery mildew is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost. - Proper staking should be provided to support during fruiting phase.
	Sowing		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Tamenglong (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 21.0 - 22.0 °C & minimum temp. -1.0 – 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 35 % (minimum RH). The average wind speed may be 3-5 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	For nursery	<b>leaf minor</b>	- Spray Monocrotophos @ 0.25-0.5ml/ lit water depending on the age of nursery.
		<b>Leaf eating caterpillar, thrips &amp; mite.</b>	- Spray Confidor @ 0.5 ml/ lit of water.
	For grown up trees	<b>Powdery mildew</b>	If <b>powdery mildew</b> is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.





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



**“Integrated Agromet Advisory Services”**

<b>Tomato</b>	Vegetative to flowering		<ul style="list-style-type: none"> <li>- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost.</li> <li>- Proper staking should be provided to support during fruiting phase.</li> </ul>
	Sowing		<ul style="list-style-type: none"> <li>- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field.</li> <li>- Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m<sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.</li> <li>- Sow seeds @ 10g/ 3m<sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.</li> </ul>

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	<ul style="list-style-type: none"> <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 B &amp; vitamin A.</li> <li>- Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed.</li> <li>- To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.</li> </ul>
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Thoubal (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 22.0 °C & minimum temp. 1.0 – 3.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 36 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	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.
	For grown up trees	Powdery mildew	If powdery mildew is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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

<b>Tomato</b>	Vegetative to flowering		<ul style="list-style-type: none"> <li>- Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects on the crop due to cold/ frost.</li> <li>- Proper staking should be provided to support during fruiting phase.</li> </ul>
	Sowing		<ul style="list-style-type: none"> <li>- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field.</li> <li>- Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m<sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs.</li> <li>- Sow seeds @ 10g/ 3m<sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.</li> </ul>

\* Smoking is advised in and around the crop field during morning and evening hours.

\* Apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

**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	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g per 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R <sub>2</sub> B vaccine at 8-9 weeks of age and 3. Killed ND virus vaccine at 16-18 weeks of age.
		Management	<ul style="list-style-type: none"> <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 B &amp; vitamin A.</li> <li>- Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed.</li> <li>- To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.</li> </ul>
<b>Sheep/ Goat</b>	Above 3 months of age (as and when required)	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
			- Administer Minthal bolus @ 1 bolus/ 40kg b.wt. accompanied with Livoferol @ 20ml daily.
<b>Pig</b>	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
		Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Administer Minthal bolus @ 1 bolus/ 40 kg b.wt. accompanied with Livozyme @ 10 ml twice daily.
<b>Cattle / Buffalo/ Mithun</b>	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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**“Integrated Agromet Advisory Services”**

**MANIPUR BULLETIN**

**27<sup>th</sup> December, 2013**

**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 28<sup>th</sup> December, 13 to 1<sup>st</sup> January, 14 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (24<sup>th</sup> to 26<sup>th</sup> December, 2013)

During the past three days the sky was partly cloudy to mainly cloudy, foggy during morning hours of 25<sup>th</sup> Dec and clear during afternoon hours of 26<sup>th</sup> Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 21.5 – 21.8 °C, range of minimum temperature observed was 3.2 – 6.0 °C, mean relative humidity observed in morning and afternoon were 89.0 % and 50.0 % respectively. The average wind speed range was 1.0 – 2.3 km/hr.

Weather forecast for next five days of Ukhrul (28<sup>th</sup> December, 2013 to 1<sup>st</sup> January, 2014)

No rain is expected upto Wednesday. Sky may be clear with maximum temp. of 21.0 °C & minimum temp. -1.0 – 2.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 43 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

**Weather Forecast for next 3 days (upto 0830 hours IST of 30th December, 2013)**

Fog/shallow fog would occur at a few places over Manipur in morning hours during next 24 hours.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
<b>Field Crops</b>			
<b>Rapeseed/ Mustard</b>	Vegetative		- Irrigation may be given at 30-35 days after sowing. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water to the infected patches only.
<b>Pulses (Pea &amp; Lentil)</b>	Vegetative		- Give light irrigation to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	- Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
<b>Rabi Maize</b>	Land preparation to sowing		- Rabi maize may be sown as intercrop with mustard or pulses. 60cm wide 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds.
<b>Storage</b>			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. Well ventilated rooms must be used for storage of grains/ seeds.
<b>Horticulture Crops</b>			
<b>Citrus</b>	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.
	For grown up trees	Powdery mildew	If powdery mildew is seen in the orchard, harvest mature fruits and spray Bayleton @7 g / 15 lit of water.
<b>Onion</b>	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea per sangam depending upon the fertility.
<b>Cauliflower</b>	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.
<b>Garden pea</b>	Vegetative		- Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.



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	Sowing		- Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. - Nursery bed of 0.75m x 4m may be prepared and mix Carbendazim @ 5g/ 3m <sup>2</sup> area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m <sup>2</sup> area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.

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		Management	- Increase energy feed upto 5% (like maize, rice bran, etc.). - Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B & vitamin A. - Protect birds from cold by hanging polythene sheet/ Hessian cloth all around the wire mesh/ poultry shed. Use electric bulb or charcoal at night time to keep rooms warm in poultry shed. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided.
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