

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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Churachandpur (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{\text{th}}$  and mainly cloudy to cloudy upto  $11^{\text{th}}$  December with maximum temp. of 24.0 - 26.0 °C & minimum temp. 5.0 - 7.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 45 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage			- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>

Phone: 2414654, 2414260, 2414749; Fax: (0385) 2414654, 2414749 E-mail: agromet\_mnp@yahoo.co.uk



Type of Farming

Carp culture

Stage

Grow-out

Management

Pond water

Feeding

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



#### "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.
210000	Nursery		<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray</li> <li>Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
	nulches after earthing	e crop field during morning up and weeding to conse	
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per
	age groups (as and when		1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	<ul> <li>1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.</li> <li>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>2. R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>3. Killed ND virus vaccine at 16-18 weeks of age.</li> </ul>
	and when	Ranikhet disease  Management	<ul> <li>3 weeks of age.</li> <li>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>2. R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> </ul>
	and when required)  Above 3 months		<ol> <li>3 weeks of age.</li> <li>1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>2. R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>3. Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7</li> </ol>
	and when required)	Management	3 weeks of age.  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.  - 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.
Sheep/ Goat	and when required)  Above 3 months of age (as and	Management  Deworming	3 weeks of age.  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.  - 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.  - Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.  Spray Butox @ 2ml in 1 lit of water for protection against mange and
Sheep/ Goat	Above 3 months of age (as and when required)	Management  Deworming Ectoparasite  Swine Fever Ectoparasites	3 weeks of age.  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.  - 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.  - Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.  Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Sheep/ Goat Pig Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)  Above 3 months of age (as and when required)  Above 3 months of age (as and	Management  Deworming Ectoparasite  Swine Fever	3 weeks of age.  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.  - 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.  - Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.  Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.  - Vaccinate against swine fever after the age of 3 months.

Agro-metrological advisories

day.

water. Maintained water depth of 1.0-1.5m.

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.

- If the pond water quality is not good then change it with fresh and clear

- If the water level in pond is decreasing then culture pond area may be

- Minimum feed must be provided in two splits @ 1-2 % of body weight per



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

 $\frac{\text{Weather forecast for next five days of Imphal - East}}{(7^{\text{th}} \text{ to } 11^{\text{th}} \text{ December, } 2013)}$ 

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{th}$  and mainly cloudy to cloudy upto  $11^{th}$  December with maximum temp. of 25.0 - 26.0 °C & minimum temp. 6.0-7.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 42 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	1		
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation		- Sowing of rabi maize may be done in prepared land.
	to sowing		
Storage			- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



# "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		- Raise nursery in polybags/ pro-tray under polyhouse/ cover The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery		<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray</li> <li>Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
* Smoking is advi	ised in and around the	e crop field during morn	
* Apply organic r	nulches after earthing		serve residual soil moisture as well as to maintain the soil temperature.
<b>Animal Science</b>	es		
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	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 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		Management	<ul> <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> </ul>
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Cattle / Buffalo/	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Mithun	of age (as and when required)		- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.
Fisheries	1	1	<del>-</del>
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	<ul> <li>If the pond water quality is not good then change it with fresh and clear water. Maintained water depth of 1.0-1.5m.</li> <li>If the water level in pond is decreasing then culture pond area may be</li> </ul>

day.

Feeding

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.

- Minimum feed must be provided in two splits @ 1-2 % of body weight per



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Imphal - West  $(7^{th} \text{ to } 11^{th} \text{ December}, 2013)$ 

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{th}$  and mainly cloudy to cloudy upto  $11^{th}$  December with maximum temp. of 24.0 - 26.0 °C & minimum temp. 6.0-8.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 42 % (minimum RH). The average wind speed may be 4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
			- Lenth may be sown with infinition thinge of zero thinge.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage			- 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.
Horticulture Cro	ps		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e. 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
Dolichos bean	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water of Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m², 1500 seedlings are required.</li> </ul>



Carp culture

Grow-out

Pond water

Feeding

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



#### "Integrated Agromet Advisory Services"

Fisheries Type of Farming	when required)  Stage	Management	to bites of warble flies.  Agro-metrological advisories
Fishorios	when required)		to bites of warble flies.
	when required)		
Mithun	of age (as and		- Himax ointment may be applied on the affected area/ wounds caused due
Cattle / Buffalo/	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
		Management	<ul> <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> </ul>
	required)	Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
Poultry	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Animal Science		D. /	
		g up and weeding to cons	erve residual soil moisture as well as to maintain the soil temperature.
		e crop field during morni	ng and evening hours.
			- Transplanting may be completed at earliest possible.
	Nursery		Carbendazim @ 1g/ lit of water.
Broccoli	Nursery	caterpillar	<ul><li>(Fame) @ 2ml/ 10 lit of water.</li><li>- If yellowing of leaves of mature seedlings is observed, spray</li></ul>
Cabbage/	Vegetative	leaf eating	- If there is incidence of leaf eating caterpillar, spray Flubendiamide
Cucurbits (off season )	Nursery		- Raise nursery in polybags/ pro-tray under polyhouse/ cover The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
TD 4			

day.

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

- If the pond water quality is not good then change it with fresh and clear

- If the water level in pond is decreasing then culture pond area may be

- Minimum feed must be provided in two splits @ 1-2 % of body weight per

water. Maintained water depth of 1.0-1.5m.

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Senapati (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto 7<sup>th</sup> and mainly cloudy to cloudy upto 11<sup>th</sup> December with maximum temp. of 23.0 - 25.0 °C & minimum temp. 3.0 - 6.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 41 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	1		<u>.</u>
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage			- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m², 1500 seedlings are required.</li> </ul>



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



### "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water Transplanting may be completed at earliest possible.
* Apply organic r	nulches after earthing	e crop field during morning up and weeding to conse	ng and evening hours.  erve residual soil moisture as well as to maintain the soil temperature.
Animal Scienc			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
	and when		
	required)	Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> </ol>
		Ranikhet disease  Management	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7</li> </ol>
Sheep/ Goat	required)  Above 3 months		<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> </ol>
Sheep/ Goat	required)	Management	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B &amp; vitamin A.</li> </ol>
_	Above 3 months of age (as and	Management  Deworming	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B &amp; vitamin A.</li> <li>Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.</li> <li>Spray Butox @ 2ml in 1 lit of water for protection against mange and</li> </ol>
Sheep/ Goat Pig	Above 3 months of age (as and when required)	Management  Deworming Ectoparasite  Swine Fever Ectoparasites	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B &amp; vitamin A.</li> <li>Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.</li> <li>Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.</li> <li>Vaccinate against swine fever after the age of 3 months.</li> <li>Spray Butox @ 2ml in 1 lit of water, twice a week.</li> </ol>
_	Above 3 months of age (as and when required)  Above 3 months of age (as and	Management  Deworming Ectoparasite  Swine Fever	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> <li>Increase energy feed upto 5% (like maize, rice bran, etc.).</li> <li>Add antibiotic, Hostacycline/ Duaprin @ 2 g/ lit of drinking water for 7 days along with vitamin B &amp; vitamin A.</li> <li>Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.</li> <li>Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.</li> <li>Vaccinate against swine fever after the age of 3 months.</li> </ol>

**Fisheries** 

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	- If the pond water quality is not good then change it with fresh and clear
			water. Maintained water depth of 1.0-1.5m.
			- If the water level in pond is decreasing then culture pond area may be
			reduced and stocking density may be maintained.
		Feeding	- Minimum feed must be provided in two splits @ 1-2 % of body weight per
			day.
			- Check fish health from time to time by netting.



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Tamenglong (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{\text{th}}$  and mainly cloudy to cloudy upto  $11^{\text{th}}$  December with maximum temp. of 25.0 - 27.0 °C & minimum temp. 6.0 - 8.0 °C. Relative Humidity may reach a maximum value of 99 % (maximum RH) & 43 % (minimum RH). The average wind speed may be 4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage	-		- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



### "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery	•	<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
		e crop field during morning	
		g up and weeding to conse	erve residual soil moisture as well as to maintain the soil temperature.
Animal Scienc	- 10		
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
	required)	Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		Management	<ul> <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> </ul>
	Above 3 months		
Sheep/ Goat		Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
Sheep/ Goat	Above 3 months of age (as and when required)	Deworming Ectoparasite	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.  Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
-	of age (as and		Spray Butox @ 2ml in 1 lit of water for protection against mange and
_	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Sheep/ Goat  Pig  Cattle / Buffalo/ Mithun	of age (as and when required)  Above 3 months of age (as and	Ectoparasite  Swine Fever	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.  - Vaccinate against swine fever after the age of 3 months.

**Fisheries** 

Stage	Management	Agro-metrological advisories
Grow-out	Pond water	- If the pond water quality is not good then change it with fresh and clear
		water. Maintained water depth of 1.0-1.5m.
		- If the water level in pond is decreasing then culture pond area may be
		reduced and stocking density may be maintained.
	Feeding	- Minimum feed must be provided in two splits @ 1-2 % of body weight per
		day.
		- Check fish health from time to time by netting.
	- 0	Grow-out Pond water



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Thoubal (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{\text{th}}$  and mainly cloudy to cloudy upto  $11^{\text{th}}$  December with maximum temp. of 25.0 - 26.0 °C & minimum temp. 5.0 - 7.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 48 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	1		-J.
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage			- 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.
Horticulture Cro	ps		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



# "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery		<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray</li> <li>Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
		e crop field during morning up and weeding to conse	ng and evening hours.  erve residual soil moisture as well as to maintain the soil temperature.
Animal Scienc		<del>, , , , , , , , , , , , , , , , , , , </del>	•
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	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 25 lit of water) of poultry abov 3 weeks of age.
		Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		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.
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Cattle / Buffalo/	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Mithun	of age (as and		

Fisheries

Stage	Management	Agro-metrological advisories
Grow-out	Pond water	- If the pond water quality is not good then change it with fresh and clear
		water. Maintained water depth of 1.0-1.5m.
		- If the water level in pond is decreasing then culture pond area may be
		reduced and stocking density may be maintained.
	Feeding	- Minimum feed must be provided in two splits @ 1-2 % of body weight per
		day.
		- Check fish health from time to time by netting.
	- 0	Grow-out Pond water



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Ukhrul (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto 7<sup>th</sup> and mainly cloudy to cloudy upto 11<sup>th</sup> December with maximum temp. of 23.0 - 24.0 °C & minimum temp. 3.0 - 5.0 °C. Relative Humidity may reach a maximum value of 97 % (maximum RH) & 47 % (minimum RH). The average wind speed may be 3-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage	-		- 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.
Horticulture Cro	ps		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



# "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Dioceon	Nursery	cucipina	- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water Transplanting may be completed at earliest possible.
* Smoking is advi	ised in and around the	e crop field during morn	
			serve residual soil moisture as well as to maintain the soil temperature.
Animal Science	es		-
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
	required)	Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		Management	<ul> <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> </ul>
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Cattle / Buffalo/	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Mithun	of age (as and when required)		- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.
Fisheries	1		1 111
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	<ul> <li>If the pond water quality is not good then change it with fresh and clear water. Maintained water depth of 1.0-1.5m.</li> <li>If the water level in pond is decreasing then culture pond area may be</li> </ul>

day.

Feeding

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.

- Minimum feed must be provided in two splits @ 1-2 % of body weight per



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Bishnupur (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto 7<sup>th</sup> and mainly cloudy to cloudy upto 11<sup>th</sup> December with maximum temp. of 24.0 - 26.0 °C & minimum temp. 5.0 - 7.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 46 % (minimum RH). The average wind speed may be 2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	1		<del>- J.</del>
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage			- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
Dolichos bean	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



# "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		- Raise nursery in polybags/ pro-tray under polyhouse/ cover The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery		<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray</li> <li>Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
		e crop field during morn	
Animal Science		g up and weeding to com	serve residual son moistare as wen as to maintain are son temperature.
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	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 25 lit of water) of poultry above 3 weeks of age.
		Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		Management	<ul> <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> </ul>
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Cattle / Buffalo/ A	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Mithun	of age (as and when required)		- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.
Fisheries		•	
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	<ul> <li>If the pond water quality is not good then change it with fresh and clear water. Maintained water depth of 1.0-1.5m.</li> <li>If the water level in pond is decreasing then culture pond area may be</li> </ul>

day.

Feeding

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.

- Minimum feed must be provided in two splits @ 1-2 % of body weight per



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



#### "Integrated Agromet Advisory Services"

# MANIPUR BULLETIN 6<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 7<sup>th</sup> to 11<sup>th</sup> December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (3<sup>rd</sup> to 5<sup>th</sup> December, 2013)

During the past three days the sky was mainly clear to partly cloudy. No rainfall was recorded during past three days. Maximum temperature range observed was  $25.5-26.6\,^{\circ}\mathrm{C}$ , range of minimum temperature observed was  $7.0-7.6\,^{\circ}\mathrm{C}$ , mean relative humidity observed in morning and afternoon were  $87.0\,\%$  and  $48.0\,\%$  respectively. The average wind speed range was  $0.9-1.4\,\mathrm{km/hr}$ .

Weather forecast for next five days of Chandel (7<sup>th</sup> to 11<sup>th</sup> December, 2013)

There may be no rain upto Wednesday. Sky may be mainly clear upto  $7^{th}$  and mainly cloudy to cloudy upto  $11^{th}$  December with maximum temp. of 24.0 - 25.0 °C & minimum temp. 4.0 - 6.0 °C. Relative Humidity may reach a maximum value of 98 % (maximum RH) & 51 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	Post-harvest		- After proper threshing and cleaning, grains must be sundried well before storage. Dry grains/ seeds to 12-14% moisture if mechanical thresher is used.
Rapeseed/ Mustard	Sowing to vegetative		<ul> <li>Rapeseed may be sown (seed rate is 10-12 kg/ha) at 30 cm row spacing.</li> <li>Recommended variety – M-27.</li> <li>After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning.</li> </ul>
Pulses	Sowing to early vegetative		For pea: - Sowing may be done at a spacing of 30cm x 10-15cm Recommended variety - Rachana. Seed rate is 75 kg/ ha. Treat the seeds with Bavistin @ 2.5 mg/ lit of water followed by Rhizobium culture @ 20g/kg of seeds before sowing Lentil may be sown with minimum tillage or zero tillage.
Rabi Maize	Land preparation to sowing		- Sowing of rabi maize may be done in prepared land.
Storage	to sowing		- 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.
Horticulture Cro	DS		
Ginger/ Turmeric	Enlargement of rhizome to maturity		<ul> <li>For eight to nine months old crops or those crops whose 70% of leaves had dried may be harvested. Harvested rhizome must be washed well to remove the soil for proper curing.</li> <li>In 6-7 months old crops (for late planted crop), if yellowing of leaves had started then apply 10-12 kg K<sub>2</sub>O/ sangam and wait for 1-1½ months for harvesting.</li> </ul>
Cauliflower	Curd initiation stage		At curd initiation stage, apply 4 kg DAP and 4 kg K <sub>2</sub> O for 200 plants, i.e., 4 g/ plant. Also, spray Tracel (micronutrient @ 5 g/ lit of water).
<b>Dolichos bean</b>	Flowering to fruiting		Harvest mature fruits and spray Cypermethrin @ 2ml/lit of water or Nuvan @ 1ml/lit of water.
Onion/ Garlic	Early vegetative		- Give light watering during morning and evening hours till plants are established.
	For late sowing of onion/ transplanting		<ul> <li>Direct seeded followed by thinning of nursery may be done for onion (at a spacing of 10 cm plant to plant &amp; 20 cm row to row) if there is shortage of manpower.</li> <li>For an area of 10 m<sup>2</sup>, 1500 seedlings are required.</li> </ul>



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



#### "Integrated Agromet Advisory Services"

Garden pea	Vegetative		- Give light irrigation just to keep soil moist.
Tomato		Early blight	- At 30-35 days after transplanting, as a prophylactic measure against early blight, spray Sixer (Carbendazim + Mancozeb) @ 2g/ lit of water at 10 days interval (at least twice).
Cucurbits (off season )	Nursery		<ul> <li>Raise nursery in polybags/ pro-tray under polyhouse/ cover.</li> <li>The low temperature and high RH may cause aphid infestation hence spray Dichlorovos @ 0.5ml/lit water or Cypermethrin @ 1 ml/lit water as prophylactic measure.</li> </ul>
Cabbage/ Broccoli	Vegetative	leaf eating caterpillar	- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
	Nursery		<ul> <li>- If yellowing of leaves of mature seedlings is observed, spray</li> <li>Carbendazim @ 1g/ lit of water.</li> <li>- Transplanting may be completed at earliest possible.</li> </ul>
* Apply organic r	nulches after earthing	e crop field during morning up and weeding to cons	
Animal Science			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Poultry	All susceptible age groups (as and when	Coccidiosis	- Amprolium powder may be added in low dose in both feed (@25 g per 1000kg of mash) and drinking water (30g 25 lit of water) of poultry above 3 weeks of age.
	required)	Ranikhet disease	<ol> <li>F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days.</li> <li>R<sub>2</sub>B vaccine at 8-9 weeks of age and</li> <li>Killed ND virus vaccine at 16-18 weeks of age.</li> </ol>
		Management	<ul> <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> </ul>
Sheep/ Goat	Above 3 months	Deworming	- Administer Banif Bolus orally @ 1 bolus/ 100 kg b. wt.
-	of age (as and when required)	Ectoparasite	Spray Butox @ 2ml in 1 lit of water for protection against mange and mites.
Pig	Above 3 months	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
	of age (as and when required)	Ectoparasites	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Cattle / Buffalo/	Above 3 months	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
Mithun	of age (as and when required)		- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.
Fisheries		•	<del>,</del>
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Grow-out	Pond water	- If the pond water quality is not good then change it with fresh and clear water. Maintained water depth of 1.0-1.5m.

day.

Feeding

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

- If the water level in pond is decreasing then culture pond area may be

- Minimum feed must be provided in two splits @ 1-2 % of body weight per

reduced and stocking density may be maintained.

- Check fish health from time to time by netting.