



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Senapati (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 14.0 - 18.0 °C & minimum temp. 0.0 – 4.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 44 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- 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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MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Tamenglong (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 19.0 - 22.0 °C & minimum temp. 4.0 – 6.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 43 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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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 21st to 25th December, 2013 as given below:

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During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Thoubal (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 18.0 - 20.0 °C & minimum temp. 2.0 – 5.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 45 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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MANIPUR BULLETIN

20th December, 2013

Ukhrul

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Weather forecast for next five days of Ukhrul (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 14.0 - 17.0 °C & minimum temp. 0.0 – 3.0 °C. Relative Humidity may reach a maximum value of 98 % (maximum RH) & 46 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
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Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

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Animal Sciences

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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	Above 3 months of age (as and when required)	Swine Fever	- Vaccinate against swine fever after the age of 3 months.
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Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
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MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Bishnupur (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 17.0 - 20.0 °C & minimum temp. 3.0 – 5.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 44 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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



“Integrated Agromet Advisory Services”

Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

I. Meghachandra Singh

Scientist i/c,

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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Chandel (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 18.0 - 20.0 °C & minimum temp. 2.0 – 4.0 °C. Relative Humidity may reach a maximum value of 98 % (maximum RH) & 46 % (minimum RH). The average wind speed may be 3-5 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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Manipur Centre, Lamphelpat, Imphal - 795 004**



“Integrated Agromet Advisory Services”

Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)</u></p> <p>During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (21st to 25th December, 2013)</u></p> <p>No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 16.0 - 20.0 °C & minimum temp. 2.0 – 5.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 43 % (minimum RH). The average wind speed may be 4 km/hr during next five days.</p>
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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rapeseed/ Mustard	Vegetative		<ul style="list-style-type: none"> - Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		<ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning.
		Aphid	<ul style="list-style-type: none"> - 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	<ul style="list-style-type: none"> - Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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



“Integrated Agromet Advisory Services”

Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

I. Meghachandra Singh

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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Imphal - East (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 16.0 - 20.0 °C & minimum temp. 3.0 – 6.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 43 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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



“Integrated Agromet Advisory Services”

Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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

MANIPUR BULLETIN

20th 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 21st to 25th December, 2013 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (17th to 19th December, 2013)

During the past three days the sky was clear to partly cloudy but mainly cloudy during afternoon hours of 19th Dec. No rainfall was recorded during past three days. Maximum temperature range observed was 20.2 – 22.0 °C, range of minimum temperature observed was 1.0 – 2.8 °C, mean relative humidity observed in morning and afternoon were 84.3 % and 44.7 % respectively. The average wind speed range was 1.1 – 1.4 km/hr.

Weather forecast for next five days of Imphal - West (21st to 25th December, 2013)

No rain is expected upto Tuesday. Sky may be clear to partly cloudy with maximum temp. of 17.0 - 21.0 °C & minimum temp. 2.0 – 5.0 °C. Relative Humidity may reach a maximum value of 100 % (maximum RH) & 43 % (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			
Rapeseed/ Mustard	Vegetative		- Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. - 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.
Pulses (Pea & Lentil)	Vegetative		- Give light irrigation to pea and lentil just 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.
Rabi Maize	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.
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 Crops			
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Banana		Sigatoka leaf spot	Spray Calixin @1 ml/lit of water along with sticker.
Onion	Vegetative		- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea depending upon the fertility.
Cauliflower/ Cabbage/ Broccoli	Head formation/ Curd formation stage to harvesting	Plutella Daimond Black Moth	Farmers are advised to spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
		Aphid & Spodoptera litura	- Dichlorovos or Dimethoate @ 1ml/lit water may be sprayed depending upon the severity of infestation and crop stage. - If the crop is in harvesting stage then instead of above spray Neem seed kernel extract 4% may be sprayed.



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“Integrated Agromet Advisory Services”

Tomato	Vegetative to flowering		<ul style="list-style-type: none"> - Those farmers whose crop is already in open field, temporary shed may be provided to avoid adverse effects in the crop due to cold/ frost. - For those farmers having tomato under the polyhouse/ solaric tunnel, proper staking should be provided to support during fruiting phase. - Branches having no flower/ fruit should be snapped off at every third node, wherever necessary to get proper sunlight and also for better utilization of nutrients at fruiting stage.
	Sowing		<ul style="list-style-type: none"> - 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/ 3m² area, keep the bed covered with gunny bag for at least 24 hrs. - Sow seeds @ 10g/ 3m² area keep the bed covered with gunny bag. Seeds will germinate in 4-5 days.
Garden pea	Vegetative		<ul style="list-style-type: none"> - Give light irrigation just to keep soil moist. - Avoid plucking of young shoots.

* 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
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	1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days. 2. R ₂ 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"> - 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. - To control increase of moisture inside the poultry shed, cross-ventilation for fresh air must be provided. - In deep litter system, if RH is high then there may be problem in controlling worms, hence regular monitoring of litter material may be done during humid weather.
Sheep/ Goat	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.
Pig	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.
Cattle / Buffalo/ Mithun	Above 3 months of age (as and when required)	Skin disease	- Spray Butox @ 2ml in 1 lit of water, twice a week.
			- For milch cow, administer 100 ml Osteovet liq. daily.
			- Himax ointment may be applied on the affected area/ wounds caused due to bites of warble flies.

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