



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



MANIPUR BULLETIN
20th December, 2016

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, 2016 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Bishnupur (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 23 – 24 °C & minimum temp. 8 - 10 °C. Relative humidity may reach up to 100 % (max RH) & 54 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly to Easterly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leaflets may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyrriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			
Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox @ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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



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<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Chandel (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 8 - 10 °C. Relative humidity may reach upto 99 % (max RH) & 61 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North Easterly to Easterly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			
Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
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		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
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Rabi maize	Land preparation to sowing		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
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Name of the animal			Grow
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Type of Farming			
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
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Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
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		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			
Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



MANIPUR BULLETIN
20th December, 2016

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, 2016 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Tamenglong (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 22 – 24 °C & minimum temp. 8 - 10 °C. Relative humidity may reach upto 100 % (max RH) & 47 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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“Gramin Krishi Mausam Seva”



Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leaflets may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyrriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			

Name of the animal				Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.	
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.	
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.	
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.	
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.	
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds	
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.	
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.	
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.	
		Ectoparasites	Butox@ 2ml/lit of water at forth night.	
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.	
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.	
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.	
	Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		

Fishery:				Stage
Type of Farming				
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.	

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 Scientist i/c, GKMS



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



MANIPUR BULLETIN
20th December, 2016

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, 2016 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Thoubal (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 22 – 24 °C & minimum temp. 7 - 9 °C. Relative humidity may reach upto 100 % (max RH) & 58 % (min RH). The average wind speed may be 2 km/hr. Wind direction may be North Easterly to Easterly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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“Gramin Krishi Mausam Seva”



Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			
Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



MANIPUR BULLETIN
20th December, 2016

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 21st to 25th December, 2016 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Ukhrul (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 17 – 20 °C & minimum temp. 5 - 7 °C. Relative humidity may reach upto 99 % (max RH) & 53 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be southerly to south westerly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			
Name of the animal			
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



MANIPUR BULLETIN
20th December, 2016

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, 2016 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (16th to 19th December, 2016) Observed fair to variable sky during and shallow fog with cloudy sky on 18th Dec and no rainfall in the past four days. Maximum temperature range of 23.3 to 23.8 °C and a rise in Minimum temperature from 7.1 to 10.9 °C with mean relative humidity 92.5 % max and 51.0 % min was recorded in the past four days. The average wind speed range remained 2.9 to 4.0 km/hr.</p>	<p>Weather forecast for next five days of Imphal East (21st to 25th December, 2016) Likely to have no rain upto Sunday. Shallow to moderate at few places and dense fog at isolated places very likely over Manipur during next 2-3 days and mainly clear sky during day time with maximum temp. 22 – 24 °C & minimum temp. 7 - 9 °C. Relative humidity may reach up to 100 % (max RH) & 49 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly to Easterly during next five days.</p>
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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leaflets may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyrriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			

Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery:			
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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Imphal East

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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Avoid plucking off of young shoots of pea plant. - Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		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		- Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/ lentil/ pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
Cole crops	Nursery raising		Nursery for late crops may be raised.
Tomato	Nursery raising to transplanting		During field preparation, before sowing, drench the nursery bed with 2.5 g of Dithane M45 + 1 g of Bavistin in 1 litres of water. Also, land preparation for transplanting nursery may be done.



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Broad bean	Early vegetative		- Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease.
Onion	Transplanting of raised seedlings and early vegetative		- 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Broccoli	Transplanting		➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Cauliflower	Transplanting to early vegetative		- Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyrithos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms.
Coriander	Sowing to early vegetative		- Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m.
Spinach (Palak)	Sowing to early vegetative		- Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required.
Tomato	Nursery		Nursery raising may be done.
Animal Sciences			

Name of the animal			Grow
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.
Sheep/ Goat	All age groups excepts the young ones	Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
		Coccidiosis	➤ Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
		Vaccination	Vaccinate against sheep/ goat pox and Enterotoxaemia.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	Butox@ 2ml/lit of water at forth night.
		Care & management	Oat/ Bersum seeds must be sown from the middle of this month.
		Mastitis	Adequate care must be taken to prevent occurrence of Masitis.
		Mastitis	To protect in-milk animals, all their milk should be removed and after milking, their udders should be cleaned with disinfectant.
Diarrhoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		

Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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Weather Forecast for next 5 days * upto 0830 hours IST of 25th December, 2016

Shallow to Moderate fog at few places and dense fog at isolated places very likely over Manipur during next 2-3 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
Rapeseed/ Mustard	Vegetative and late sowing		- 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 if the soil moisture have decline. - Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. - Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
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Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Rabi Vegetable (cole crops)	Transplanting and early vegetative		- If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water.
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Fishery:			Stage
Type of Farming			
Carp/ Catfish culture	Harvesting and stock maintenance		- Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval.

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