



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

**MANIPUR BULLETIN****23rd January, 2018****Bishnupur**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Bishnupur (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 25-26 °C & minimum temp. 7-8 °C and relative humidity may reach up to 100% (max RH) & 37% (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RCM 13 (90-105 days) or RCM 7 (110-120 days) - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. • Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> • Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> • Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> • If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. • Take adequate care to prevent occurrence of Mastitis. • PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> • Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> • Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> • Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> • De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> • Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> • Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> • Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> • De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> • Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> • Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



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**MANIPUR BULLETIN****23rd January, 2018**Chandel

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Chandel (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 24-25 °C & minimum temp. 6-7 °C and relative humidity may reach up to 99% (max RH) & 43% (min RH). The average wind speed may be 3-5 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RC Manipouh 12 (90-105 days). - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. Take adequate care to prevent occurrence of Mastitis. PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> Avoid dampness to protect from Pneumonia. Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. Cases of H.S. may be encountered during this period Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> Mixture of mineral/ salts should be added in the feed. Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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**MANIPUR BULLETIN****23rd January, 2018****Churachandpur**

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Weather forecast for next five days of Churachandpur (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 25-26 °C & minimum temp. 6-7 °C and relative humidity may reach up to 100% (max RH) & 34% (min RH). The average wind speed may be 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RC Manipouh 12 (90-105 days). - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
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French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. Take adequate care to prevent occurrence of Mastitis. PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> Avoid dampness to protect from Pneumonia. Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> Vaccinate against FMD and Swine Fever.
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Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. Cases of H.S. may be encountered during this period Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> Mixture of mineral/ salts should be added in the feed. Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



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**MANIPUR BULLETIN****23rd January, 2018**Senapati

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

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Weather forecast for next five days of Senapati (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 21-22 °C & minimum temp. 4-6 °C and relative humidity may reach up to 100% (max RH) & 28% (min RH). The average wind speed may be 2 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RC Manipouh 12 (90-105 days). - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. • Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> • Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> • Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> • If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. • Take adequate care to prevent occurrence of Mastitis. • PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> • Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> • Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> • Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> • De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> • Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> • Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> • Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> • De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> • Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> • Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



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“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd January, 2018****Tamenglong**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Tamenglong (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 22-23 °C & minimum temp. 4-5 °C and relative humidity may reach up to 100% (max RH) & 34% (min RH). The average wind speed may be 2-3 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RC Maniphou 12 (90-105 days). - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. Take adequate care to prevent occurrence of Mastitis. PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> Avoid dampness to protect from Pneumonia. Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. Cases of H.S. may be encountered during this period Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> Mixture of mineral/ salts should be added in the feed. Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



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Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd January, 2018****Thoubal**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Thoubal (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 25-26 °C & minimum temp. 7-8 °C and relative humidity may reach up to 100% (max RH) & 34% (min RH). The average wind speed may be 0-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RCM 13 (90-105 days) or RCM 7 (110-120 days) - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”



Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. Take adequate care to prevent occurrence of Mastitis. PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> Avoid dampness to protect from Pneumonia. Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. Cases of H.S. may be encountered during this period Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> Mixture of mineral/ salts should be added in the feed. Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



ICAR Research Complex for N.E.H. Region
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“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd January, 2018****Ukhrul**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Ukhrul (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 22-23 °C & minimum temp. 4-5 °C and relative humidity may reach up to 99% (max RH) & 41% (min RH). The average wind speed may be 3-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RC Manipouh 12 (90-105 days). - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. • Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> • Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> • Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> • If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. • Take adequate care to prevent occurrence of Mastitis. • PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> • Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	<ul style="list-style-type: none"> • Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> • Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
		• De-worming	<ul style="list-style-type: none"> • De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	<ul style="list-style-type: none"> • Vaccinate against FMD and Swine Fever.
		• Skin disease	<ul style="list-style-type: none"> • Sprayer of Anti-<i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	<ul style="list-style-type: none"> • Vaccinate against B.Q., F.M.D. & H.S. if not yet vaccinated. • Cases of H.S. may be encountered during this period • Immediate treatment using appropriate drugs with the help of Consultant must be advocated to save the animals.
		• Deworming	<ul style="list-style-type: none"> • De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	<ul style="list-style-type: none"> • Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	<ul style="list-style-type: none"> • Adequate care must be ensured for prevention of mastitis for the milch animals.

• Fodder cultivation: Oat crop may be sown immediately.

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



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**MANIPUR BULLETIN****23rd January, 2018****Imphal East**

GKMS at AMFU- Lamphelpat, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and India Meteorological Department, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th January, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (19th to 22nd January, 2018)

Observed mainly clear sky but partly cloudy during morning hours of 20th Jan with **no** rainfall during past four days. Maximum temperature range of 23.9 to 24.2 °C and minimum temperature range of 6.2 to 7.2 °C with mean relative humidity 87 % max and 47 % min was recorded in the past four days.

Weather forecast for next five days of Imphal East (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 24-25 °C & minimum temp. 6-7 °C and relative humidity may reach up to 100% (max RH) & 28% (min RH). The average wind speed may be 2-3 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Seed collection and land preparation for nursery		<ul style="list-style-type: none"> - Use quality seeds of pre-kharif rice for sowing. Recommended variety: RCM 13 (90-105 days) or RCM 7 (110-120 days) - Prepare 700-800 m² area of rice nursery for transplanting of one hectare area. - Seed rate-transplanted crops: 50-60 kg /ha or broadcast (puddle field): 65-70 kg/ha or line planting : 30-40 kg/ha
Rapeseed/ Mustard	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - Insecticide sprays must be given during afternoon hours only. - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used. If the infestation is severe, then spray a systemic insecticide i.e. dimethoate once.
		Downy mildew, Powdery mildew, white rust & Alternaria blight	<ul style="list-style-type: none"> - Spray Garlic Bulb Extract (ST) @ 1% or Trichoderma harzianum.
Field Pea	Flowering to fruiting		<ul style="list-style-type: none"> - Retain early pods of selected plants for seeds.
Lentil/ Blackgram (late variety)	Flowering to fruiting	Aphid	<ul style="list-style-type: none"> - For organic control against aphid, sprays that consist of Azadirachtin, neem oil or Pyrethrin may be used.
		Powdery mildew & rust	<ul style="list-style-type: none"> - Spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and nimbicidin (0.3%) to control rust disease.
Rabi Maize	Vegetative		<ul style="list-style-type: none"> - Light irrigation may be given to keep soil moist if the soil is dry.
Potato	Vegetative to tuber formation		<ul style="list-style-type: none"> - Give light irrigation if the soil is dry. Ensure that the soil loose enough for better tuber growth.
		Cut worm	<ul style="list-style-type: none"> - Spray Carbaryl @ 30ml/ 15 litre of water against cut worm.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - For seed purpose store the seeds in RC-seed bins after proper drying and cleaning of seeds along with dry charcoal at 80:20. Check for moisture content or weight of charcoal and dry if required. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Mango	Flowering		<ul style="list-style-type: none"> - Flower during 1st year of planting may be removed as it may suppress its corresponding growth that is essential in building up the young trees. - To protect from mango hopper, spray 800ml Malathion 50 EC or 700ml of Thiodan in 250 litres of water. - Paint the trunk of tree with Bordeaux paste (1:1:100) upto a height of 4-5 feet above the ground as prophylactic measure against diseases.
French bean	Land preparation and sowing		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties like Pant Anupam & Arka Komal is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Land preparation and sowing		<ul style="list-style-type: none"> - Prepare land for sowing bhindi.



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Cucurbits	Nursery raising		<ul style="list-style-type: none"> - Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse/ poly-tunnel. - Recommended varieties of water melon :- Sugar Baby, Madhavi-10, Madhuri and NS 295.
Onion	Vegetative to bulb formation initiation		<ul style="list-style-type: none"> - If the bulb formation stage has started then it must be checked that the soil is not too dry also care should be taken that the neck portion should be above the ground level.
Cole crops	Nursery raising		<ul style="list-style-type: none"> - Nursery for late crops may be raised.
Tomato	Nursery to transplanting		<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.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Management	<ul style="list-style-type: none"> Protect animals/ birds from cold. Cover the wall with hessian cloth/ polythene sheet during night time. Provide Furavet Powder @ 1g/ 2 lit of drinking water and Vimeral @ 5 ml per lit of water. Provide external heat source such as “Meifu”/ chulhas or bulb. • Litter must be stirred frequently and aired every day.
		• Coccidiosis	<ul style="list-style-type: none"> • Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	<ul style="list-style-type: none"> • Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	<ul style="list-style-type: none"> • If the animals have not been vaccinated against F.M.D., B.Q., H.S., Enterotoxaemia, etc. this must be done during this month. • Take adequate care to prevent occurrence of Mastitis. • PPR immunization must be done once in every three years.
		• De-worming	<ul style="list-style-type: none"> • Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
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Pig	All age groups except the young ones	• Coccidial infection	<ul style="list-style-type: none"> • Ofloxacin/ Ornidazole (O₂) tab twice daily for 5 days.
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		• Care & Management	<ul style="list-style-type: none"> • Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
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• Fodder cultivation: Oat crop may be sown immediately.

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**MANIPUR BULLETIN****23rd January, 2018****Imphal West**

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Weather forecast for next five days of Imphal West (24th to 28th January, 2018)

Likely to have no rainfall and clear sky upto Sunday. The maximum temp. 24-25 °C & minimum temp. 6-7 °C and relative humidity may reach up to 100% (max RH) & 35% (min RH). The average wind speed may be 0-2 km/hr.

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