



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

**MANIPUR BULLETIN****23rd February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 26-27 °C & minimum temp. 9-10 °C and relative humidity may reach up to 93 % (max RH) & 26 % (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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyrifos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyrifos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 24-25 °C & minimum temp. 7-8 °C and relative humidity may reach up to 86 % (max RH) & 38 % (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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyrifos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyrifos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



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French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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 February, 2018****Churachandpur**

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 February, 2018 as below:

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 14-18 °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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyrifos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyrifos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



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“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		<ul style="list-style-type: none"> - Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		<ul style="list-style-type: none"> - Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		<ul style="list-style-type: none"> - During the bulb formation stage check 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	Transplanting		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
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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	• 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	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
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		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• 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	• 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	• 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 February, 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 February, 2018 as below:

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 12-17 °C and relative humidity may reach up to 82 % (max RH) & 38 % (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	Land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - Before first plough apply 10-15 t of FYM/ compost per hectare. Apply fertilizer @ 21kg Urea, 87 kg DAP and 32 kg MOP per hectare at the time of final leveling. - For broadcasting, seeds should be uniformly sprouted before sowing. - Uproot seedlings at 21-25 days after sowing depending on seedlings size and availability of water. Transplant the seedlings immediately (not later than 2 days) after uprooting to avoid transplanting shocks.
Rapeseed/ Mustard	Maturity	Hairy caterpillar	<ul style="list-style-type: none"> - Spray Chloropyrifos @ 2ml/ litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		<p>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.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>

Horticulture Crops

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			<ul style="list-style-type: none"> - For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		<ul style="list-style-type: none"> - Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		<ul style="list-style-type: none"> - In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



ICAR Research Complex for N.E.H. Region

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“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

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

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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 12-17 °C and relative humidity may reach up to 82 % (max RH) & 40 % (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	Land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - Before first plough apply 10-15 t of FYM/ compost per hectare. Apply fertilizer @ 21kg Urea, 87 kg DAP and 32 kg MOP per hectare at the time of final leveling. - For broadcasting, seeds should be uniformly sprouted before sowing. - Uproot seedlings at 21-25 days after sowing depending on seedlings size and availability of water. Transplant the seedlings immediately (not later than 2 days) after uprooting to avoid transplanting shocks.
Rapeseed/ Mustard	Maturity	Hairy caterpillar	<ul style="list-style-type: none"> - Spray Chloropyrifos @ 2ml/ litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		<p>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.</p> <p>For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.</p>

Horticulture Crops

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			<ul style="list-style-type: none"> - For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		<ul style="list-style-type: none"> - Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		<ul style="list-style-type: none"> - In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



ICAR Research Complex for N.E.H. Region

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“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 21-22 °C & minimum temp. 5-6 °C and relative humidity may reach up to 100 % (max RH) & 25 % (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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyriphos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		- If the soil is dry, give light irrigation to maintain soil moisture status.
		Stem borer	- Weeding may be done. - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
French bean	Sowing to vegetative		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Cole crops	Nursery raising		- Nursery for late crops may be raised.

**ICAR Research Complex for N.E.H. Region**

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

Animal Sciences			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension@60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 23-24 °C & minimum temp. 6-7 °C and relative humidity may reach up to 84 % (max RH) & 44 % (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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyriphos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 26-27 °C & minimum temp. 9-10 °C and relative humidity may reach up to 93 % (max RH) & 41 % (min RH). The average wind speed may be 0-2 km/hr.

Field Crops

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-kharif Rice	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyrifos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyrifos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		<ul style="list-style-type: none"> - If the soil is dry, give light irrigation to maintain soil moisture status. - Weeding may be done.
		Stem borer	- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - If late blight is observed in potato, spray Mencozeb @ 2-3 g/ litre at 7 days interval for 3 times in severe case. - For seed: <ul style="list-style-type: none"> • Strict supervision on removal of unwanted plant type should be maintained. • Maturity days should be strictly maintained as per variety. • Harvest the crop after 10-15 days after haulm cutting.
Seeds storage	Post harvest management		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

* Give life saving irrigation to passion fruit, pineapple and other fruit crops. Apply mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Banana			- For planting banana make pits of size 50x50x50cm. Fill the pit with top soil and well decomposed FYM/ compost 2-4 weeks before planting sucker.
Tree bean/ Lime/ Lemon	Land preparation and collection of planting material		<ul style="list-style-type: none"> - Preparation of pits or field for planting tree bean/ lime/ lemon/ banana may be started. - Collection of good planting material from reliable source may be done.
Ginger/ Turmeric	Land preparation		- Land preparation for planting of ginger/ turmeric may be started. Mix manures @ 20-25 t/ ha 15 days before planting.
Chilli/ capsicum	Nursery		In chillies and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



French bean	Sowing to vegetative		- Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Bhindi	Sowing to vegetative		- Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. - Give light irrigation after 2-3 days of sowing.
Cucurbits	Transplanting		- Transplant already raised 4-leaf stage seedlings under low cost polyhouse. If transplanted in open field then mulching materials like paddy straw should be used to protect young plants from cold. Light watering must be done for already transplanted seedlings during morning hours.
Onion	Bulb formation		- During the bulb formation stage check 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		- Nursery for late crops may be raised.
Tomato	Transplanting		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - A light irrigation should be given just after transplanting.

Animal Sciences

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Duck)	All age groups	• Ranikhet disease	• Vaccinate against Ranikhet disease.
		• Coccidiosis	• Give Amprolium @ 1 gm/ litre of drinking water for 5-7 days.
		• Parasitic	• Give Albendazole liquid @ 40 ml for 100 birds once only and half dose by next day is suggested.
Sheep/ Goat	All age groups	• Vaccination	• 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	• Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
		• Management	• Avoid dampness to protect from Pneumonia. • Increase energy feed by 5%.
Pig	All age groups except the young ones	• Coccidial infection	• Ofloxacin/ Ornidazole (O ₂) tab twice daily for 5 days.
		• De-worming	• De-worm with Albendazole @ 7.5 mg/kg b.wt.
		• Vaccination	• Vaccinate against FMD and Swine Fever.
		• Skin disease	• Sprayer of Anti- <i>Psoroptic</i> may be used
Cattle	All age groups excepts the young ones	• Vaccination	• 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	• De-worm with Albomac suspension @ 60-90ml for 300kg body weight or 20-30ml for 100 kg body weight.
		• Care & Management	• Mixture of mineral/ salts should be added in the feed. • Avoid the cattle from chiting/biting by Flies. Adopt tick control measures
		Mastitis	• 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 February, 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 February, 2018 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (20th to 22nd February, 2018)

Observed mainly clear to mainly cloudy with **no** rainfall during past three days. Maximum temperature range of 25.0 to 25.5 °C and minimum temperature range of 7.3 to 8.7 °C with mean relative humidity 83.7 % max and 60.3 % min was recorded in the past three days.

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

Likely to have light rains at isolated places upto Wednesday and mainly clear to mainly cloudy sky. The maximum temp. 23-24 °C & minimum temp. 6-7 °C and relative humidity may reach up to 84 % (max RH) & 24 % (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	Nursery to land preparation of main field and direct seeding		<ul style="list-style-type: none"> - Maintain water level just to submerge the aerial sprouts and later increase the water level. - Yellowing of tender leaves due to sucking by thrips and whorl maggot may be controlled by spraying Chloropyriphos 0.05% @ 2ml/lit of water. - Land preparation of main field may be started. Irrigate the field upto 5-7 cm after a cross plough. Submerge the plot 15-20 days before the expected date of transplanting to obtain weed free plot. - For broadcasting, seeds should be uniformly sprouted before sowing.
Rapeseed/ Mustard	Siliqua formation to maturity	Pieris brassica	If incidence of Pieris brassica is observed (which bore the pods of rapeseeds of mustard) then spray Coragen @ 2ml/15 lit of water.
		Hairy caterpillar	- Spray Chloropyriphos @ 2ml/litre of water to the infected patches only.
			Irrigation is essential at this stage for sustaining favorable condition for seed formation.
Field Pea/ Lentil/ Blackgram (late variety)	Fruiting and maturity		Retain well filled disease free mature pods for seeds. Spray Propiconazole @ 1ml/ litre of water or Sulfax @ 2g/ litre of water for management of rust/ powdery mildew and downey mildew disease.
Rabi Maize	Vegetative to pre-flowering		- If the soil is dry, give light irrigation to maintain soil moisture status.
		Stem borer	- Weeding may be done. - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		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.

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French bean	Sowing to vegetative		<ul style="list-style-type: none"> - Sowing of French bean may be done in prepared land. Seed rate for dwarf varieties is 65kg/ha (spacing is 30x45 cm from seed to seed and row to row) and 25-30kg/ha and for pole-type (spacing is 60x60cm with 2-3 seeds per hill). - Give light irrigation after 2-3 days of sowing.
Cole crops	Nursery raising		- Nursery for late crops may be raised.

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