



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

**MANIPUR BULLETIN****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Bishnupur (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 28-29 °C & minimum temp. 9-10 °C and relative humidity may reach up to 100 % (max RH) & 27 % (min RH). The average wind speed may be 2-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Chandel (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 26-27 °C & minimum temp. 7-8 °C and relative humidity may reach up to 96 % (max RH) & 28 % (min RH). The average wind speed may be 3-5 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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.			

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**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****13<sup>th</sup> February, 2018****Churachandpur**

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**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Churachandpur (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 8-9 °C and relative humidity may reach up to 100 % (max RH) & 29 % (min RH). The average wind speed may be 2-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**Animal Sciences**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
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		✓ De-worming	✓ Administer Tolzan-F @ 2.5ml orally/ 50kg b. wt.
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Pig	All age groups except the young ones	✓ Coccidial infection	✓ Ofloxacin/ Ornidazole (O <sub>2</sub> ) tab twice daily for 5 days.
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		✓ 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****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

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**Weather forecast for next five days of Imphal East (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 27-28 °C & minimum temp. 8-10 °C and relative humidity may reach up to 100 % (max RH) & 22 % (min RH). The average wind speed may be 0-5 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chillies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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)  
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**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Imphal West (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 27-28 °C & minimum temp. 8-10 °C and relative humidity may reach up to 100 % (max RH) & 26 % (min RH). The average wind speed may be 0-5 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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.			

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

**MANIPUR BULLETIN****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Senapati (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 5-7 °C and relative humidity may reach up to 100 % (max RH) & 24 % (min RH). The average wind speed may be 2-5 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chillies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.



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



<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvalerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg laying on fruit in the days to come.

**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 <sub>2</sub> ) 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****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Tamenglong (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 6-7 °C and relative humidity may reach up to 94 % (max RH) & 25 % (min RH). The average wind speed may be 3-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: } 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.
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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)  
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**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Thoubal (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 28-29 °C & minimum temp. 9-10 °C and relative humidity may reach up to 100 % (max RH) & 25 % (min RH). The average wind speed may be 2-4 km/hr.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Potato</b>	Maturity to harvesting		For seed: <ul style="list-style-type: none"> <li>} Strict supervision on removal of unwanted plant type should be maintained.</li> <li>} Maturity days should be strictly maintained as per variety.</li> <li>} Harvest the crop after 10-15 days after haulm cutting.</li> </ul>
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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.
<b>Horticulture Crops</b>			
* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Chilli/ capsicum</b>	Nursery		In chilies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
<b>Bhindi</b>	Sowing		- 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.
<b>Cucurbits</b>	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.

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**“Gramin Krishi Mausam Seva”**

<b>Onion</b>	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.
<b>Cole crops</b>	Nursery raising		- Nursery for late crops may be raised.
<b>Tomato</b>	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.
<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvelerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg lying on fruit in the days to come.

**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 <sub>2</sub> ) 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.			

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**MANIPUR BULLETIN****13<sup>th</sup> 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 14<sup>th</sup> to 18<sup>th</sup> February, 2018 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (9<sup>th</sup> to 12<sup>th</sup> February, 2018)**

Observed mainly clear to partly cloudy with **no** rainfall during past four days. Maximum temperature range of 23.5 to 27.3 °C and minimum temperature range of 8.0 to 11.7 °C with mean relative humidity 88.8 % max and 42.3 % min was recorded in the past four days.

**Weather forecast for next five days of Ukhrul (14<sup>th</sup> to 18<sup>th</sup> February, 2018)**

Likely to have light rains upto Sunday and partly cloudy to mainly cloudy sky. The maximum temp. 25-26 °C & minimum temp. 6-7 °C and relative humidity may reach up to 98 % (max RH) & 28 % (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
<b>Pre-kharif Rice</b>	Nursery		- 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.
<b>Rapeseed/ Mustard</b>	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.
<b>Field Pea/ Lentil/ Blackgram (late variety)</b>	Fruiting and maturity		Retain well filled disease free mature pods for seeds.
<b>Rabi Maize</b>	Vegetative to pre-flowering		- 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.
<b>Seeds storage</b>	Post harvest management		For seed purpose store the seeds in <b>RC-seed bins</b> 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**

\* Life saving irrigation to passion fruit, pineapple and other fruit crops may be applied and mulch with dry grass at the basin to conserve the soil moisture.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Chilli/ capsicum</b>	Nursery		In chillies and capsicum, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack.
<b>French bean</b>	Land preparation and sowing		- 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.
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<b>Cucurbits</b>	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.

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<b>Mango</b>	Flowering	Leaf Hopper	Pruning of branches from trees must be done. Avoid high density planting. Spray Cypermethrin or Fenvalerate (0.01%) followed by Carbaryl (0.1%) at an interval of one week.
		Stone Weevil	Spray Carbaryl (0.1%) during this season on the trees upto a height of 2m and on all inflorescence as prophylactic measure. Apply stick band at the upper end of the trunk to prevent migration of weevils to branches for egg laying on fruit in the days to come.

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