



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

**MANIPUR BULLETIN****24<sup>th</sup> March, 2017****Bishnupur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Bishnupur (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 23 – 26 °C & minimum temp. 11 - 13 °C. Relative humidity may reach up to 91 % (max RH) & 43 % (min RH). The average wind speed may be 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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.

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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

(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****24<sup>th</sup> March, 2017****Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Chandel (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 °C & minimum temp. 11 - 13 °C. Relative humidity may reach up to 84 % (max RH) & 44 % (min RH). The average wind speed may be 4 - 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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.

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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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

**MANIPUR BULLETIN****24<sup>th</sup> March, 2017****Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Churachandpur (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 22 – 25 °C & minimum temp. 11 - 13 °C. Relative humidity may reach up to 89 % (max RH) & 38 % (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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhuil hawaii) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.



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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

(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****24<sup>th</sup> March, 2017****Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

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**Weather forecast for next five days of Senapati (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 20 – 23 °C & minimum temp. 10 - 12 °C. Relative humidity may reach up to 94 % (max RH) & 37 % (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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.

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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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

**MANIPUR BULLETIN****24<sup>th</sup> March, 2017****Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Tamenglong (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 25 – 27 °C & minimum temp. 12 - 15 °C. Relative humidity may reach up to 91 % (max RH) & 37 % (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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.



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			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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

**MANIPUR BULLETIN****24<sup>th</sup> March, 2017****Thoubal**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Thoubal (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 °C & minimum temp. 11 - 13 °C. Relative humidity may reach up to 92 % (max RH) & 46 % (min RH). The average wind speed may be 2 - 6 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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawaii) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.

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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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

**MANIPUR BULLETIN****24<sup>th</sup> March, 2017****Ukhrul**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Ukhrul (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 20 – 23 °C & minimum temp. 11 - 13 °C. Relative humidity may reach up to 84 % (max RH) & 39 % (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>	Tillering		<ul style="list-style-type: none"> <li>- Maintain 5-8cm of water level after 3-4 days of transplanting.</li> <li>- Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.</li> </ul>
<b>Rabi maize</b>	Flowering		<ul style="list-style-type: none"> <li>- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds.</li> <li>- For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- Construct proper drainage system to avoid water logging in and around the crop field.</li> </ul>
<b>Ginger &amp; Turmeric</b>	Planting		<ul style="list-style-type: none"> <li>- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare.</li> <li>- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia</li> <li>- Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.</li> </ul>
<b>French Bean</b>	Sowing		<ul style="list-style-type: none"> <li>- Spacing: 30x45 cm from seed to seed &amp; row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhu hawai) at 60x60 cm with 2-3 seeds per hill.</li> <li>- Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.</li> </ul>
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		<ul style="list-style-type: none"> <li>- Light watering during morning hours may be given in nursery.</li> <li>- Late transplanting may be done.</li> </ul>
<b>Bhindi</b>	Sowing		<p>Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing.</p> <p>Recommended varieties are - Arka Anamika and Pusa Sawani</p>
<b>Chilli/ capsicum</b>	Nursery to early vegetative		<ul style="list-style-type: none"> <li>- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack.</li> <li>- Transplant nursery after rains in raised beds.</li> <li>- Capsicum are found better in the naturally ventilated polyhouse.</li> </ul>
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 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.</li> </ul>



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

			- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting. - A light irrigation should be given just after transplanting.
<b>Onion/ Garlic</b>	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.

**Animal Sciences**

<b>Name of the animal</b>			
<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

(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****24<sup>th</sup> March, 2017****Imphal East**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 25<sup>th</sup> to 29<sup>th</sup> March, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (21<sup>st</sup> to 23<sup>rd</sup> March, 2017)**

Observed mainly cloudy to overcast on 21<sup>st</sup> Mar then mainly clear to partly cloudy sky thereafter and **12.2 mm** rainfall was recorded during past three days. Maximum temperature range of 22.1 to 27.2 °C and minimum temperature range of 10.1 to 12.6 °C with mean relative humidity 88.3 % max and 47.3 % min was recorded in the past three days. The average wind speed range remained 4.0 to 4.3 km/hr.

**Weather forecast for next five days of Imphal East (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 23 – 25 °C & minimum temp. 12 - 13 °C. Relative humidity may reach up to 98 % (max RH) & 40 % (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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
<b>Rabi maize</b>	Flowering		- Provisions may be made to maintain optimum water content of soil. Drain out excess water if accumulated in crop field due to rains.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <b>godowns</b> .
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
<b>Ginger &amp; Turmeric</b>	Planting		- While preparing land for planting ginger/ turmeric apply 1 t FYM, 65 kg Urea, 375 kg SSP and 80 kg MOP per hectare. - Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting.
<b>French Bean</b>	Sowing		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhal hawaii) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Late transplanting in open field to early vegetative		- Light watering during morning hours may be given in nursery. - Late transplanting may be done.
<b>Bhindi</b>	Sowing		Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	Nursery to early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack. - Transplant nursery after rains in raised beds. - Capsicum are found better in the naturally ventilated polyhouse.
<b>Tomato/ Brinjal</b>	Transplanting to vegetative		- 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.



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			<ul style="list-style-type: none"><li>- Apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.</li><li>- A light irrigation should be given just after transplanting.</li></ul>
Onion/ Garlic	Bulb formation	Bulb rot	- Spray Sixer/ (Mencozeb + Carbendazim) @ 2 gm/lit of water as prophylactic measure against Bulb rot in the crops grown in shed.
		Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch and bulb rot	- Spray Sixer @ 2 gm/lit of water as prophylactic measure against Purple Bloch and bulb rot. Spray is to be given twice at an interval of 7 to 10 days.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R <sub>2</sub> B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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**Weather forecast for next five days of Imphal West (25<sup>th</sup> to 29<sup>th</sup> March, 2017)**

Likely to have rain/ thunder storm accompanied with squall/ hail at isolated places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 °C & minimum temp. 12 - 13 °C. Relative humidity may reach up to 95 % (max RH) & 38 % (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>	Tillering		- Maintain 5-8cm of water level after 3-4 days of transplanting. - Construct proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water if accumulated in crop field due to rains.
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<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Transplanting to vegetative		- Construct proper drainage system to avoid water logging in and around the crop field.
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