



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



MANIPUR BULLETIN

17th 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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Bishnupur (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 23 – 25 ° C & minimum temp. 11 - 13 ° C. Relative humidity may reach up to 97 % (max RH) & 54 % (min RH). The average wind speed may be 2-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 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, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



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			<ul style="list-style-type: none"> - Transplant nursery after rains in raised beds. - Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none"> - During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. <ol style="list-style-type: none"> 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. R₂B 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

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



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Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Chandel (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 ° C & minimum temp. 13 - 15 ° C. Relative humidity may reach up to 97 % (max RH) & 56 % (min RH). The average wind speed may be 2-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



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Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none">- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.- Apply 75:30:60 kg of NPK/ ha at the time of transplanting.- A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none">- During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- 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 ₂ 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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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
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Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkul hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
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Chilli/ capsicum	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.



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Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting.
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Animal Sciences

Name of the animal

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

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Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.

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

			<ul style="list-style-type: none"> - Transplant nursery after rains in raised beds. - Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none"> - During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. <ol style="list-style-type: none"> 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. R₂B 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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	<ul style="list-style-type: none"> ➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	<ul style="list-style-type: none"> ➤ 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

(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

17th 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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Thoubal (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 ° C & minimum temp. 13 - 15 ° C. Relative humidity may reach up to 97 % (max RH) & 57 % (min RH). The average wind speed may be 2-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			<ul style="list-style-type: none"> - Transplant nursery after rains in raised beds. - Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none"> - During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. <ol style="list-style-type: none"> 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. R₂B 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

(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****17th 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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Ukhrul (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 26 – 29 ° C & minimum temp. 13 - 15 ° C. Relative humidity may reach up to 97 % (max RH) & 48 % (min RH). The average wind speed may be 3-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhal hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

			<ul style="list-style-type: none">- Transplant nursery after rains in raised beds.- Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none">- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.- Apply 75:30:60 kg of NPK/ ha at the time of transplanting.- A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none">- During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- 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 ₂ 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

(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****17th 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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017)

Observed mainly cloudy to overcast upto 12th Mar then mainly clear sky thereafter and **37.7 mm** rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.

Weather forecast for next five days of Imphal East (18th to 22nd March, 2017)

Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 23 – 26 ° C & minimum temp. 10 - 12 ° C. Relative humidity may reach up to 99 % (max RH) & 47 % (min RH). The average wind speed may be 2-4 km/hr.

Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhal hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

			<ul style="list-style-type: none">- Transplant nursery after rains in raised beds.- Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none">- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.- Apply 75:30:60 kg of NPK/ ha at the time of transplanting.- A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none">- During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- 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 ₂ 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

(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****17th March, 2017****Imphal West**

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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Imphal West (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 24 – 26 ° C & minimum temp. 9 - 12 ° C. Relative humidity may reach up to 99 % (max RH) & 44 % (min RH). The average wind speed may be 2-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkul hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

			<ul style="list-style-type: none">- Transplant nursery after rains in raised beds.- Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none">- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.- Apply 75:30:60 kg of NPK/ ha at the time of transplanting.- A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none">- During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- 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 ₂ 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

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



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



MANIPUR BULLETIN

17th 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 18th to 22nd March, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (14th to 16th March, 2017) Observed mainly cloudy to overcast upto 12 th Mar then mainly clear sky thereafter and 37.7 mm rainfall was recorded during past three days. Maximum temperature range of 20.0 to 25.0 ° C and minimum temperature range of 11.4 to 14.6 ° C with mean relative humidity 92.75 % max and 59.0 % min was recorded in the past three days. The average wind speed range remained 3.0 to 5.6 km/hr.	Weather forecast for next five days of Tamenglong (18th to 22nd March, 2017) Likely to have rains/ thundershowers at few places and mainly clear to partly cloudy sky with maximum temp. 26 – 30 ° C & minimum temp. 13 - 16 ° C. Relative humidity may reach up to 98 % (max RH) & 45 % (min RH). The average wind speed may be 3-4 km/hr.
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Thunder storm accompanied with squall very likely at isolated places on 18th March, 2017

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Transplanting to vegetative		- Row planting of 35-40 days old seedlings may be done at a spacing of 25x10cm using beaded rope. - At the time of final leveling, apply 97 kg Urea, 87Kg DAP and 45 Kg MOP/ ha. - Maintain 5-8cm of water level after 3-4 days of transplanting.
Rabi maize	Vegetative to flowering		- Provisions may be made to maintain optimum water content of soil.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns .
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cassava (Tapioca)	Planting		8-10 months old healthy disease free 25-30 cm long planting material of thickness 2-3cm. Remove 1/3 rd of the total length of the stem from the top. Use middle and bottom parts of stem for stake. Shallow planting facilitates more roots production. Loose soil is preferred at the time of planting. To economize the total requirement of stake, bury the stakes for 30days for callus formation and root initiation. Two buds minisettis raised in nursery may be planted after treating with fungicides.
Sweet potato	Planting		Vine cutting may be obtained from stored tubers/ freshly harvested crops. Vines from primary nursery 25sq.m may be multiplied into secondary nursery of 125 sq. m and transplant in one sangam of main field.
Ginger & Turmeric	Land preparation to sowing		Sorting of rhizome for seed may be started for new planting. Land preparation for planting may be done and sowing may be started.
French Bean	Sowing		- Spacings: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkul hawai) at 60x60 cm with 2-3 seeds per hill. - Apply 12-13 kg Urea, 12-15 kg SSP and 40-45 kg MOP per ha at the time of sowing.
Cucurbits	Land preparation for transplanting in open field		- Light watering during morning hours may be given in nursery. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Tree bean/ Lime/ Lemon/ Khasi Mandarin/ Banana	Land preparation and collection of planting material		- Preparation of pits or field for planting tree bean/ lime/ lemon/ khasi mandarin/ banana may be started. - Collect good quality planting material from known source.
Bhindi	Sowing		For sowing bhindi, land preparation may be done. 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
Chilli/ capsicum	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.

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

			<ul style="list-style-type: none"> - Transplant nursery after rains in raised beds. - Give light watering to keep soil moist during vegetative phase.
Tomato/ Brinjal	Transplanting to vegetative		<ul style="list-style-type: none"> - 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting.
Onion/ Garlic	Bulb formation		<ul style="list-style-type: none"> - During the bulb formation stage, check that the neck portion is not covered with soil. Light hoeing and irrigation is necessary to keep soil moist during this phase.
		Leaf minor	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. <ol style="list-style-type: none"> 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. R₂B 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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	<ul style="list-style-type: none"> ➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	<ul style="list-style-type: none"> ➤ 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.

SMS:

Lakliba Thangjada nungsit akanbaga loinana mafam kharada nong chuba yai. Angan-phou thadokpagi matung numit 3-4ni surakanda 5-8cm luna ishing thambiyu. Koli hawai thadrigeida hectare amada 12-13kg Urea, 12-15kg SSP amadi 40-45 kg MOP happiyu.

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