



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

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Churachandpur (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 26 – 28 °C & minimum temp. 11-13 °C. Relative humidity may reach up to 74 % (max RH) & 13 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be South South-Easterly during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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			- Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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



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“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Ukhrul (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 25 – 27 °C & minimum temp. 9-11 °C. Relative humidity may reach up to 92 % (max RH) & 14 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North Easterly on 25th then South Westerly thereafter during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & siliqua is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	<ul style="list-style-type: none"> - Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	<ul style="list-style-type: none"> Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	<ul style="list-style-type: none"> Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"> - Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	<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	<ul style="list-style-type: none"> - Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		Deworming	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> ➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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	<ul style="list-style-type: none"> - Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	<ul style="list-style-type: none"> Animals should be milked completely.
		Fodder cultivation	<ul style="list-style-type: none"> Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

(I. Meghachandra Singh)
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**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Tamenglong (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 25 – 27 °C & minimum temp. 10-12 °C. Relative humidity may reach up to 75 % (max RH) & 14 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North East Easterly on 25th then South Easterly thereafter during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<ul style="list-style-type: none"> Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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			<ul style="list-style-type: none"> - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"> - Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	<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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	<ul style="list-style-type: none"> ➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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



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**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

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Weather forecast for next five days of Thoubal (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 27 – 29 °C & minimum temp. 11-13 °C. Relative humidity may reach up to 76 % (max RH) & 13 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be South South-Easterly to South West-Westerly during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. - Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliques mature. It must be harvested during morning before drying of dew to avoid shattering of pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<ul style="list-style-type: none"> - Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			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
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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



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

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Ukhrul (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 25 – 27 °C & minimum temp. 8-10 °C. Relative humidity may reach up to 69 % (max RH) & 18 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be South westerly upto 24th then North West Westerly thereafter during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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“Gramin Krishi Mausam Seva”



			<ul style="list-style-type: none"> - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"> - Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	<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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	<ul style="list-style-type: none"> ➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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



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

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Imphal East (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 25 – 27 °C & minimum temp. 9-11 °C. Relative humidity may reach up to 94 % (max RH) & 13 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North Easterly on 24th then Southerly Westerly thereafter during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & siliqua is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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“Gramin Krishi Mausam Seva”



			- Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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



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

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Imphal West (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 25 – 27 °C & minimum temp. 9-11 °C. Relative humidity may reach up to 86 % (max RH) & 13 % (min RH). The average wind speed may be 2-3 km/hr. Wind direction may be North Easterly on 24th then Southerly thereafter during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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“Gramin Krishi Mausam Seva”



			<ul style="list-style-type: none"> - Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	<ul style="list-style-type: none"> - Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	<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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	<ul style="list-style-type: none"> ➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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.

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

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Bishnupur (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 26 – 28 °C & minimum temp. 10-12 °C. Relative humidity may reach up to 71 % (max RH) & 13 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be South Easterly to South South-Westerly during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. - Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliques mature. It must be harvested during morning before drying of dew to avoid shattering of pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<ul style="list-style-type: none"> - Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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



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			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
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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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“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****23rd February, 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 24th to 28th February, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (21st to 23rd morning February, 2017)

Observed mainly clear sky and shallow fog at foothills during morning hours of 17th & 18th Feb with no rainfall during past four days. Maximum temperature range of 21.9 to 27.7 °C and rise in minimum temperature range of 8.7 to 11.3 °C with mean relative humidity 84.0 % max and 43.3 % min was recorded in the past four days. The average wind speed range remained 3.3 to 5.6 km/hr.

Weather forecast for next five days of Chandel (24th to 28th February, 2017)

Likely to have no rain and sky clear with maximum temp. 26 – 28 °C & minimum temp. 11-13 °C. Relative humidity may reach up to 63 % (max RH) & 16 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be Westerly to North West Westerly during next five days.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Pre-Kharif rice	Nursery to transplanting		<ul style="list-style-type: none"> - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. Treat seeds with Carbendazim @ 2g/kg of seeds. - Soaking and incubation of seeds may be started before sowing when minimum temperature reaches 10-12 °C. -Transplant the seedling at 20-25 days after sowing.
Potato	Maturity to harvesting		<ul style="list-style-type: none"> - Cut the haulm at ground level. Ensure no re-growth of the stem. - Harvest the crop when the skin of the tuber has become firm. - Harvest should be done on sunny day only. Heap the produce in the shade for curing of skin and left undisturbed for 15-20 days.
Rapeseed/ Mustard	Maturity to harvesting		<ul style="list-style-type: none"> - Harvest the crops when the color of leaves, stem & silique is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods. - Harvest mature crops before rains to avoid loss and attain quality yield.
Pulses	Maturity to harvesting		<ul style="list-style-type: none"> - Well filled and disease free pods may be harvested for seeds for next season.
Rabi maize	Vegetative		<ul style="list-style-type: none"> - Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status. - When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.
		Stem borer	<ul style="list-style-type: none"> - To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.
Seeds storage	Post harvest management		<ul style="list-style-type: none"> - 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
Cucurbits	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> - Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout. - Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.
Bhindi	Sowing		<p>Land preparation for sowing bhindi may be done. Sowing of bhindi/ladies finger may be done at the spacing of 30cm x 45cm. Apply 25kg urea, 33kg DAP and 25kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani</p>
Brinjal/ chilli	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.
Tomato	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.



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			- Apply 75:30:60 kg of NPK/ ha at the time of transplanting. - A light irrigation should be given just after transplanting
Garden pea/ Broad bean	Fruiting to harvesting	powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
Onion/ Garlic	Vegetative to bulb formation	Leaf minor	Spray Dichlorovos @ 1ml/ litre of water.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting	Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
Coriander	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.

Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
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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