



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



MANIPUR BULLETIN
7th February, 2017

Senapati

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Senapati (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 20 – 22 °C & minimum temp. 3 - 5 °C. Relative humidity may reach up to 99 % (max RH) & 29 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North easterly to westerly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
			<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
Pulses	Fruiting to harvesting	Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
			<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal

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.
		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.
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.
		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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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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Tamenglong (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 24 – 26 °C & minimum temp. 7 - 10 °C. Relative humidity may reach up to 98 % (max RH) & 28 % (min RH). The average wind speed may be 3-6 km/hr. Wind direction may be south easterly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Rust or Powdery mildew	- Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds. - Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
Pulses	Fruiting to harvesting		<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal			
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.
		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.
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.
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		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.

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Thoubal

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<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Thoubal (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 6 - 9 °C. Relative humidity may reach up to 94 % (max RH) & 26 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be south easterly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
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Animal Sciences

Name of the animal

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Ukhrul

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Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademeefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
			<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
Pulses	Fruiting to harvesting	Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
			<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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



	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal

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.
		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.
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.
		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
7th 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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Imphal East (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 24 – 25 °C & minimum temp. 7 - 9 °C. Relative humidity may reach up to 98 % (max RH) & 26 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly during next five days but westerly on 9th Feb.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories	
Field Crops				
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. 	
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.	
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times. 	
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.	
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.	
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.	
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.	
		Pulses	Fruiting to harvesting	<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew		- Spray Propiconazole @ 15ml/ 15 litre water.
Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.			
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. 	
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				
Cucurbits	Nursery raising		<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. 	
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.	
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done. 	



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



	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Diamond 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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal			
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.
		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.
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.
		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****7th 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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Imphal West (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 6 - 9 °C. Relative humidity may reach up to 98 % (max RH) & 26 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly during next five days but westerly on 9th Feb.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
			<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
Pulses	Fruiting to harvesting	Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
			<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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



	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal

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.
		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.
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.
		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****7th 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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Bishnupur (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 6 - 8 °C. Relative humidity may reach up to 95 % (max RH) & 26 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be North Easterly during next five days but westerly on 9th Feb.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
			<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
Pulses	Fruiting to harvesting	Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
			<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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



	transplanting		
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. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		<ul style="list-style-type: none"> - Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		<ul style="list-style-type: none"> - Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Diamond 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		<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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal

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.
		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.
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.
		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
7th 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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Chandel (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 24 – 25 °C & minimum temp. 7 - 9 °C. Relative humidity may reach up to 90 % (max RH) & 27 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be westerly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed.
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.
Potato	Tuber formation to maturity	Late Blight	<ul style="list-style-type: none"> - Give light irrigation to keep soil moist. - 40-45 days old plants need light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam. - As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/lit alternately with Mencozeb @ 2gm/lit of water at 14 days interval for 2-3 times.
		Pod borer	- Spray Imidachloprid @ 0.25 ml/ litre of water to the infected patches.
		White rust	- Spray Dithane M-45 @ 2g/ litre of water at 10 days interval.
Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
			<ul style="list-style-type: none"> - Light irrigation may be given if the soil is dry. - Retain healthy and early pods of selected plants for seeds.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
Pulses	Fruiting to harvesting	Aphid	- Spray Imidachloprid 17.8 SL @ 7-10ml/ 15 litre of water against aphid.
			<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.
			<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.
Seeds storage	Post harvest management		
Horticulture Crops			
Cucurbits	Nursery raising		<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.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Brinjal/ chilli	Nursery to land preparation for		<ul style="list-style-type: none"> - Raise nursery. - Land preparation for transplanting of brinjal/ chilli may be done.



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



	transplanting		
Tomato	Transplanting to vegetative		- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt. - Apply 75:30:60 kg of NPK at the time of transplanting. - A light irrigation should be given just after transplanting - Light watering may be done to maintain soil moisture.
Garden pea/ Broad bean	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		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		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
Cabbage/ Cauliflower/ Broccoli	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		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		- 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.
Spinach (Palak)	Vegetative to flowering		- Light watering may be done to maintain soil moisture.

Animal Sciences

Name of the animal

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.
		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.
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.
		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****7th 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 4th to 8th February, 2017 as below:

<p>Significant past weather for the preceding bi-weekly of Imphal - West (3rd to 6th February, 2017) Observed mainly clear sky, fog at foothills on 4th and shallow fog on 5th Feb in past four days. Maximum temperature range of 24.6 to 26.6 °C and rise in minimum temperature range of 5.9 to 7.2 °C with mean relative humidity 90.3 % max and 36.3 % min was recorded in the past three days. The average wind speed range remained 2.6 to 3.8 km/hr.</p>	<p>Weather forecast for next five days of Churachandpur (8th to 12th February, 2017) Likely to have no rain upto Sunday. Shallow to moderate fog is likely to occur during morning hours of next 2 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 6 - 9 °C. Relative humidity may reach up to 96 % (max RH) & 27 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be south easterly during next five days.</p>
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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories	
Field Crops				
Pre-Kharif rice	Land preparation		<ul style="list-style-type: none"> - Prepare 700 m² area for raising pre-kharif rice nursery for transplanting in 1 ha land. Apply well decomposed FYM/ compost @ 1 t/ 700 m² at final leveling. - Nursery bed should be well puddled and leveled to avoid uneven stagnation of water. - Treat seeds with Carbendazim @ 2g/kg of seeds. - Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m² of nursery bed. 	
		Cut worm	If cut-worm is observed then prepare poison bait of Trichlorfon (mixture of 1kg husk + 40g sugar + 5g Trichlorfon + water) and apply manually by putting near the stem of plant above the soil surface.	
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Rapeseed/ Mustard	Siliqua formation to maturity	Downy Mildew	Spray Triademefon (Bayleton) 50 WP @ 10g/15litres of water (2-3 sprays) at 15 days interval as soon as the symptoms start appearing on the plants.	
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Animal Sciences

Name of the animal

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