

Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Bishnupur

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of 13^{th} and 14^{th} Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Bishnupur $(18^{th} to 22^{nd} January, 2017)$

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $21-23\,^{\circ}\mathrm{C}$ & minimum temp. $3-5\,^{\circ}\mathrm{C}$. Relative humidity may reach up to 97 % (max RH) & 30 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		,L	J
Potato	Vegetative to flowering		 Keep soil moist for good growth. If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop
		Aphid	area. Avoid spray of insecticides in such area. - Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
	fruiting	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	Sowing to vegetative		- Sowing of rabi maize may be done Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops		-IL	<u>, </u>
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato	Vegetative			- Light watering may be done to maintain soil moisture.		
Garden pea/ Broad bean Vegetative flowering		70		 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 mile and yellow ru		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.		
Onion	Vegetative			 Give light irrigation if the soil is dry. 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/sangam depending upon the fertility. 		
Cauliflower	Vegetative t head format		nond	- Light watering may be done to maintain soil moisture. Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.		
Coriander	Vegetative	Black Woth		 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			- Light watering may be done to maintain soil moisture.		
Animal Sciences						
Name of the anima	al					
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & management Ranikhet disease	Prop mus	Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. 1. F-1 Strain may be first administered within 7 days of age and second dose may be		
			give 2. R 3. K	en at 30days for all birds. 2B vaccine of 8-9 weeks of age group birds (layers). Cilled ND virus vaccine of 16-18 weeks of age group birds (layers).		
Sheep/ Goat	All age groups excepts the young ones	Deworming Vaccination		 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. Vaccinate against sheep/ goat pox and Enterotoxaemia. 		
	All age groups except the	De-worming Care and management		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. Mineral mixture be added in feed @10-20 g/adult animal.		
Pig	young ones		A A	Treat drinking water with potassium permanganate/ sanitizer. Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds		
Cattle All age group excepts the		Mites infestation Deworming	~	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	young ones	B.Q./ H.S/FMD Ectoparasites	But	Foot & Mouth Disease, etc. ox@ 2ml/lit of water at forth nightly interval.		
Fishery: Type of Farming		Letoparasites				
Carp/ Catfish culture	Harvesting and stock maintenance		10,0 - Fe - W	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha. eeds should be provided @ 3 % body weight per day. fell balanced feed fortified with vitamins and minerals should be provided. pply Lime @ 30-35 kg/ha at 30days interval.		



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Chandel

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Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of $13^{\rm th}$ and $14^{\rm th}$ Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Chandel (18th to 22nd January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $20-22\,^{\circ}$ C & minimum temp. $2-4\,^{\circ}$ C. Relative humidity may reach up to 94 % (max RH) & 36 % (min RH). The average wind speed may be 3-5 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		,L	J
Potato	Vegetative to flowering		 Keep soil moist for good growth. If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop
		Aphid	area. Avoid spray of insecticides in such area. - Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
	fruiting	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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops	<u> </u>		-
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato		Vegetative				- Light watering may be done to maintain soil moisture.			
Garden pea/ Brobean	_		0			 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 milde and yellow rus		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.			
Onion		Vegetative				 Give light irrigation if the soil is dry. 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/sangam depending upon the fertility. 			
Cauliflower		Vegetative thead formation		Plutella, Daimo Black Moth	ond	- Light watering may be done to maintain soil moisture. Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.			
Coriander		Vegetative		Black Woth		 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				- Light watering may be done to maintain soil moisture.			
Animal Science									
Name of the anin									
Poultry (Chicken/ Turkey/ Duck)	Al	l age groups		Care & management Ranikhet disease		Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. 1. F-1 Strain may be first administered within 7 days of age and second dose may be			
					give 2. R 3. K	en at 30days for all birds. 2B vaccine of 8-9 weeks of age group birds (layers). Cilled ND virus vaccine of 16-18 weeks of age group birds (layers).			
Sheep/ Goat	ex	l age groups cepts the oung ones	Dewo Vaccii			 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. Vaccinate against sheep/ goat pox and Enterotoxaemia. 			
	Al	l age groups	De-wo	_		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.			
Pig		cept the oung ones	Care a	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 			
	İ		Mites	infestation	>	Spray with Skin Heal Spray in sufficient quantity.			
Cattle		l age groups	Dewor	rming		Give Piperazine liquid @ 10-15ml orally once only.			
		excepts the young ones		H.S/FMD		➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.			
			Ectopa	arasites	But	ox@ 2ml/lit of water at forth nightly interval.			
Fishery: Type of Farming	1		1						
Carp/ Catfish culture	stoc	vesting and k ntenance			10,0 - Fe	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha. eds should be provided @ 3 % body weight per day. ell balanced feed fortified with vitamins and minerals should be provided.			
		пантенанее				oply Lime @ 30-35 kg/ha at 30days interval.			



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Weather forecast for next five days of Churachandpur $(18^{th}$ to 22^{nd} January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $21-23\,^{\circ}$ C & minimum temp. $3-4\,^{\circ}$ C. Relative humidity may reach up to 98 % (max RH) & 29 % (min RH). The average wind speed may be 4 km/hr. Wind direction may be South Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			J.
Potato	Vegetative to flowering		 - Keep soil moist for good growth. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/	Vegetative to		- Regular monitoring of moisture of soil may be done to ensure good growth.
Mustard	flowering		Irrigation may be given if the soil moisture have decline.
112400014			- If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to		- Give light irrigation to pea and lentil just to keep soil moist during vegetative
	flowering and		stage.
	fruiting	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	Sowing to		- Sowing of rabi maize may be done.
	vegetative		- Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops			-
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato		Vegetative				- Light watering may be done to maintain soil moisture.		
Garden pea/ Brobean	ad	Vegetative t	0			- 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 milde and yellow rus		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/shady area.		
Onion		Vegetative		, , , , , , , , , , , , , , , , , , ,		- Give light irrigation if the soil is dry.		
Omon						- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/		
						sangam depending upon the fertility.		
Cauliflower		Vegetative t				- Light watering may be done to maintain soil moisture.		
		head formati	ion	Plutella, Daime	ond	Spray Dichlorovos 76 EC @ 1ml/lit of water may be sprayed at 7 days interval		
				Black Moth		depending upon the severity of the infestation.		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
						- For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended		
Cninach (Dalak	`	Vegetative				to protect against soil borne diseases. - Light watering may be done to maintain soil moisture.		
Spinach (Palak Animal Science		vegetative				- Light watering may be done to maintain son moisture.		
Name of the anim		l age groups	Como	& management	Descri	tect from intense cold. Keep the shed wall covered with hessian cloth during night.		
(Chicken/	A	i age groups	Care	x management		per ventilation must be provided to protect from moisture inside the shed. Litter		
Turkey/ Duck)	`					st be kept dry.		
Turkey/ Duck)			Ranik	Ranikhet disease		 F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 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).		
			Dewo	rming	>	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with		
Sheep/ Goat		l age groups				half the dose at regular interval of 3 weeks.		
		cepts the oung ones	Vacci	Vaccination		ecinate against sheep/ goat pox and Enterotoxaemia.		
			De-we	orming	>	De-worming of animals should be done using Abendazole/ Levamisole @7.5		
		l age groups				mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
Pig	ex	cept the	Care a	and management		Mineral mixture be added in feed @10-20 g/adult animal.		
116	yo	oung ones				Treat drinking water with potassium permanganate/ sanitizer.		
			3.51			➤ Provide ample ventilation in the shed/dry bedding. Avoid dampness in sheds		
				infestation		Spray with Skin Heal Spray in sufficient quantity.		
Cattle		l age groups	Dewo	rming		Give Piperazine liquid @ 10-15ml orally once only.		
		cepts the oung ones	PO/	H.S/FMD	>	If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	yo	ung ones		arasites	Rut	Foot & Mouth Disease, etc. Butox@ 2ml/lit of water at forth nightly interval.		
Fishery:			Ectop	arasnes	Dut	oxe 2mi/nt of water at forth highly interval.		
Type of Farming								
Carp/ Catfish	Harv	vesting and				ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha.		
culture	stoc	-			,	beds should be provided @ 3 % body weight per day.		
		ntenance				fell balanced feed fortified with vitamins and minerals should be provided.		
						pply Lime @ 30-35 kg/ha at 30days interval.		



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Weather forecast for next five days of Senapati (18th to 22nd January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $17-19\,^{\circ}$ C & minimum temp. $1-3\,^{\circ}$ C. Relative humidity may reach up to 95 % (max RH) & 25 % (min RH). The average wind speed may be 4 km/hr. Wind direction may be South Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			J.
Potato	Vegetative to flowering		 - Keep soil moist for good growth. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
	-	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.
		Late Blight	- 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.
Rapeseed/	Vegetative to		- Regular monitoring of moisture of soil may be done to ensure good growth.
Mustard	flowering		Irrigation may be given if the soil moisture have decline.
112400014			- If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to		- Give light irrigation to pea and lentil just to keep soil moist during vegetative
	flowering and		stage.
	fruiting	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	Sowing to		- Sowing of rabi maize may be done.
G	vegetative		- Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops			-
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.









Tomato		Vegetative				- Light watering may be done to maintain soil moisture.		
Garden pea/ Broad bean Vegetative flowering		Vegetative to flowering	0			 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 mildev and yellow rust	V	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.		
Onion		Vegetative		and yenow rust		- Give light irrigation if the soil is dry.		
Omon						- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.		
Cauliflower		Vegetative to head formati		Plutella, Daimo Black Moth	nd	- Light watering may be done to maintain soil moisture. Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.		
Coriander		Vegetative				 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)	1	Vegetative				- Light watering may be done to maintain soil moisture.		
Animal Sciences								
Name of the anim								
Poultry (Chicken/ Turkey/ Duck)	All	l age groups	Care &	Care & management		Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.		
	Ranikhet disease		 F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. R₂B vaccine of 8-9 weeks of age group birds (layers). Killed ND virus vaccine of 16-18 weeks of age group birds (layers). 					
Sheep/ Goat		l age groups	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.			
		cepts the ung ones	Vacci	Vaccination		ecinate against sheep/ goat pox and Enterotoxaemia.		
	All	l age groups	De-wo	orming		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
Pig		cept the ung ones	Care a	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 		
			Mites	infestation	➤ Spray with Skin Heal Spray in sufficient quantity.			
Cattle		l age groups	Dewo	rming		Give Piperazine liquid @ 10-15ml orally once only.		
Cattic		excepts the young ones		H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.			
T71 7			Ectop	arasites	But	ox@ 2ml/lit of water at forth nightly interval.		
Fishery: Type of Farming								
Carp/ Catfish culture	Harv stock	resting and			10,0 - Fe	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha. eds should be provided @ 3 % body weight per day.		
	main	itenance			- W	Tell balanced feed fortified with vitamins and minerals should be provided. pply Lime @ 30-35 kg/ha at 30days interval.		



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Tamenglong

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of 13^{th} and 14^{th} Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Tamenglong $(18^{th}$ to 22^{nd} January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $21-23\,^{\circ}$ C & minimum temp. $3-4\,^{\circ}$ C. Relative humidity may reach up to 98 % (max RH) & 25 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			J
Potato	Vegetative to flowering		 - Keep soil moist for good growth. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i>.
Horticulture Crops			170 m gouowns.
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato	Vegetative				- Light watering may be done to maintain soil moisture.		
Garden pea/ Broad bean Vegetative t flowering		to			 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 milde 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	Vegetative				 Give light irrigation if the soil is dry. 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility. 		
Cauliflower	Vegetative head forma	tion	Plutella, Daimo Black Moth	ond	- Light watering may be done to maintain soil moisture. Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.		
Coriander	Vegetative		Black Moth		 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				- Light watering may be done to maintain soil moisture.		
Animal Sciences							
Name of the anim					J.		
Poultry (Chicken/ Turkey/ Duck)	All age groups		Care & management Ranikhet disease		Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. 1. F-1 Strain may be first administered within 7 days of age and second dose may be		
				give 2. R 3. K	en at 30days for all birds. 2B vaccine of 8-9 weeks of age group birds (layers). Eilled ND virus vaccine of 16-18 weeks of age group birds (layers).		
Sheep/ Goat	All age groups excepts the	Vaccina			 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. Vaccinate against sheep/ goat pox and Enterotoxaemia. 		
	young ones All age groups	De-wor	ming		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
Pig	except the young ones	Care an	nd 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		
	All age groups	Mites in Deworn	nfestation ning	~	> Spray with Skin Heal Spray in sufficient quantity.		
Cattle	excepts the young ones	B.Q./ H	.S/FMD	>	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.		
Fishery: Type of Farming		Ectopar	asites	Buto	ox@ 2ml/lit of water at forth nightly interval.		
Carp/ Catfish culture	Harvesting and stock maintenance			10,0 - Fe - We	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha. eds should be provided @ 3 % body weight per day. ell balanced feed fortified with vitamins and minerals should be provided. oply Lime @ 30-35 kg/ha at 30days interval.		



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Thoubal

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of $13^{\rm th}$ and $14^{\rm th}$ Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Thoubal (18th to 22nd January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $21-23\,^{\circ}\,C$ & minimum temp. 2- $4\,^{\circ}\,C$. Relative humidity may reach up to 98 % (max RH) & 32 % (min RH). The average wind speed may be 2-6 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		,L	J
Potato	Vegetative to flowering		 Keep soil moist for good growth. If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop
		Aphid	area. Avoid spray of insecticides in such area. - Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
	fruiting	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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops	<u> </u>		-
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato		Vegetative				- Light watering may be done to maintain soil moisture.			
Garden pea/ Brobean	_		0			 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 milde and yellow rus		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.			
Onion		Vegetative				 Give light irrigation if the soil is dry. 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/sangam depending upon the fertility. 			
Cauliflower		Vegetative thead formation		Plutella, Daimo Black Moth	ond	- Light watering may be done to maintain soil moisture. Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.			
Coriander		Vegetative		Black Woth		 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				- Light watering may be done to maintain soil moisture.			
Animal Science									
Name of the anin									
Poultry (Chicken/ Turkey/ Duck)	Al	l age groups		Care & management Ranikhet disease		Protect from intense cold. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. 1. F-1 Strain may be first administered within 7 days of age and second dose may be			
					give 2. R 3. K	en at 30days for all birds. 2B vaccine of 8-9 weeks of age group birds (layers). Cilled ND virus vaccine of 16-18 weeks of age group birds (layers).			
Sheep/ Goat	ex	l age groups cepts the oung ones	Dewo Vaccii			 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. Vaccinate against sheep/ goat pox and Enterotoxaemia. 			
	Al	l age groups	De-wo	_		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.			
Pig		cept the oung ones	Care a	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 			
	İ		Mites	infestation	>	Spray with Skin Heal Spray in sufficient quantity.			
Cattle		l age groups	Dewor	rming		Give Piperazine liquid @ 10-15ml orally once only.			
		excepts the young ones		H.S/FMD		➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.			
			Ectopa	arasites	But	ox@ 2ml/lit of water at forth nightly interval.			
Fishery: Type of Farming	1		1						
Carp/ Catfish culture	stoc	vesting and k ntenance			10,0 - Fe	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha. eds should be provided @ 3 % body weight per day. ell balanced feed fortified with vitamins and minerals should be provided.			
		пантенанее				oply Lime @ 30-35 kg/ha at 30days interval.			



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Ukhrul

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of 13^{th} and 14^{th} Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Ukhrul (18th to 22nd January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $17-19\,^{\circ}$ C & minimum temp. $1-3\,^{\circ}$ C. Relative humidity may reach up to 95 % (max RH) & 31 % (min RH). The average wind speed may be 3-4 km/hr. Wind direction may be South Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	T		
Potato	Vegetative to flowering		 Keep soil moist for good growth. If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop
		Aphid	area. Avoid spray of insecticides in such area. - Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
	fruiting	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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops			
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato		Vegetative	getative			- Light watering may be done to maintain soil moisture.		
Garden pea/ Bro	oad	Vegetative to				- Light watering may be done to maintain soil moisture.		
bean		flowering				- Earthing up and top dressing with 20kg urea per ha followed by watering may		
						be advised to the farmers.		
				powdery mildew		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow		
				and yellow rust		rust especially to the crops grown in moist/ shady area.		
Onion		Vegetative				- Give light irrigation if the soil is dry.		
<u> </u>						- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/		
						sangam depending upon the fertility.		
Cauliflower		Vegetative t				- Light watering may be done to maintain soil moisture.		
		head formation		Plutella, Daimond		Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval		
				Black Moth		depending upon the severity of the infestation.		
Coriander		Vegetative				- 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				- Light watering may be done to maintain soil moisture.		
Animal Science								
Name of the anim			T					
Poultry	A	ll age groups	Care &	& management		tect from intense cold. Keep the shed wall covered with hessian cloth during night.		
(Chicken/						per ventilation must be provided to protect from moisture inside the shed. Litter		
Turkey/ Duck)			D 11	1 . 1.		st be kept dry.		
			Ranik	het 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. 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). 		
			Dowo	rmina		Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with		
Sheep/ Goat	Δ	ll age groups	Deworming Vaccination		half the dose at regular interval of 3 weeks.			
Sheep/ Goat		excepts the				conate against sheep/ goat pox and Enterotoxaemia.		
		young ones		v accination		condition against shoops god port and Enterotoridonia.		
			De-wo	orming	~	De-worming of animals should be done using Abendazole/ Levamisole @7.5		
	A	All age groups except the young ones		Care and management		mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
D! ~	ex					➤ Mineral mixture be added in feed @ 10-20 g/adult animal.		
Pig	yo					Treat drinking water with potassium permanganate/ sanitizer.		
						Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds		
			Mites infestation			Spray with Skin Heal Spray in sufficient quantity.		
Cattle		ll age groups	Dewo	rming				
Cattle		excepts the young ones				> If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	yc			B.Q./ H.S/FMD		Foot & Mouth Disease, etc.		
			Ectoparasites		But	ox@ 2ml/lit of water at forth nightly interval.		
Fishery: Type of Farming								
Carp/ Catfish	Har	Harvesting and stock maintenance			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha.		
culture	stoc					eeds should be provided @ 3 % body weight per day.		
	mai					ell balanced feed fortified with vitamins and minerals should be provided.		
					- Ap	pply Lime @ 30-35 kg/ha at 30days interval.		



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Imphal West

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of 13^{th} and 14^{th} Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Imphal West $(18^{th}\ to\ 22^{nd}\ January,\ 2017)$

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. 20 - 22 °C & minimum temp. 2 - 4 °C. Relative humidity may reach up to 96 % (max RH) & 25 % (min RH). The average wind speed may be 4-6 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops			
Potato	Vegetative to flowering		 - Keep soil moist for good growth. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
	-	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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		- Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline.
			- If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
	fruiting	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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i> .
Horticulture Crops			
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.







Tomato		Vegetative	e			- Light watering may be done to maintain soil moisture.		
Garden pea/ Bro bean	en pea/ Broad Vegetative t flowering		0			- 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		Vegetative		•		- Give light irrigation if the soil is dry.		
Omon						- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/		
						sangam depending upon the fertility.		
Cauliflower		Vegetative t				- Light watering may be done to maintain soil moisture.		
		head formation		Plutella, Daimon		Spray Dichlorovos 76 EC @ 1ml/lit of water may be sprayed at 7 days interval		
				Black Moth		depending upon the severity of the infestation.		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
						- For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended		
C!		Vegetative				to protect against soil borne diseases. - Light watering may be done to maintain soil moisture.		
Spinach (Palak		vegetative				- Light watering may be done to maintain son moisture.		
Animal Science								
Name of the anin		11	G 0		ъ.			
Poultry	A	ll age groups	Care &	management		Protect from intense cold. Keep the shed wall covered with hessian cloth during night.		
(Chicken/ Turkey/ Duck)						per ventilation must be provided to protect from moisture inside the shed. Litter st be kept dry.		
Turkey/ Duck)			Danikh	net disease		7-1 Strain may be first administered within 7 days of age and second dose may be		
			Kalliki	iet disease		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		
Sheep/ Goat	A	ll age groups		O		half the dose at regular interval of 3 weeks.		
-	excepts the young ones		Vaccination		Vac	ccinate against sheep/ goat pox and Enterotoxaemia.		
			De-wo	rming	>	De-worming of animals should be done using Abendazole/ Levamisole @7.5		
		ll age groups	Care and management			mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
Pig	ex	cept the				Mineral mixture be added in feed @10-20 g/adult animal.		
119	yo	oung ones						
			Mites infestation					
Cattle		ll age groups	Dewor	ming		Give Piperazine liquid @ 10-15ml orally once only.		
		cepts the			>			
	yo	oung ones	B.Q./ H.S/FMD Ectoparasites		Foot & Mouth Disease, etc. Butox@ 2ml/lit of water at forth nightly interval.			
771			Ectopa	rasites	But	ox@ 2ml/lit of water at forth nightly interval.		
Fishery: Type of Farming								
Carp/ Catfish	Har	Harvesting and stock maintenance			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha.		
						eds should be provided @ 3 % body weight per day.		
	mai					ell balanced feed fortified with vitamins and minerals should be provided.		
					- Ap	pply Lime @ 30-35 kg/ha at 30days interval.		



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 17th January, 2017

Imphal East

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 18th to 22nd January, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(13^{th}\ to\ 16^{th}\ January,\ 2017)$

Observed mainly clear sky but foggy at foothills during morning hours of 13^{th} and 14^{th} Jan, 2017 and no rainfall in past four days. Maximum temperature range of 21.2 to 22.2 °C and minimum temperature range of 4.2 to 4.4 °C with mean relative humidity 87.8 % max and 44.0 % min was recorded in the past four days. The average wind speed range remained 2.4 to 2.9 km/hr.

Weather forecast for next five days of Imphal East $(18^{th}$ to 22^{nd} January, 2017)

Likely to have no rain upto Sunday. Mainly clear sky with maximum temp. $20-22\,^{\circ}\,C$ & minimum temp. 3- $4\,^{\circ}\,C$. Relative humidity may reach up to 99 % (max RH) & 26 % (min RH). The average wind speed may be 4-5 km/hr. Wind direction may be North Easterly during next five days.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		L	J
Potato	Vegetative to flowering		 - Keep soil moist for good growth. - If it is 40-45 days old, light hoeing/ earthing up may be done followed by top dressing with 30-35 Kg DAP/ sangam.
		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.
		Late Blight	- 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.
Rapeseed/ Mustard	Vegetative to flowering		 Regular monitoring of moisture of soil may be done to ensure good growth. Irrigation may be given if the soil moisture have decline. If flowering has started, then four bee boxes may be kept for one hectare crop area. Avoid spray of insecticides in such area.
		Aphid	- Use yellow plates for every 3 sq.m to attract the aphids or spray Pyrethrum @ 2ml/ litre of water on the infected patches.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
Pulses	Vegetative to flowering and fruiting		- Give light irrigation to pea and lentil just to keep soil moist during vegetative stage.
		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	Sowing to vegetative		Sowing of rabi maize may be done.Irrigate field, if the soil is dry.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> 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 <i>godowns</i>.
Horticulture Crops			170 m gouowns.
Banana		Sigatoka Leaf Spot	- If Sigatoka Leaf Spot disease is observed then spray Calixin @ 1 ml/ lit of water.
			- 200g, 300g and 500g Urea, SSP and MOP respectively should be applied in three split doses at two, six and eight months after planting.
Citrus	After harvesting		Remove water sprouts (tender green shoots emerged from main stem), dried and dead branches after harvesting of fruits. Paste the cut ends with Bordeaux paste.
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits in poly-pouch and trays under low cost poly-house or naturally ventilated polyhouse.
French bean and Bhindi	Land Preparation		Land preparation for sowing may be started.
Rabi Vegetable (cole crops)	Vegetative to head formation		- If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. Spray Imidachloprid 17.8SL @5ml/10 litres of water on 20days old seedlings as prophylactic spray.



Manipur Centre, Lamphelpat, Imphal - 795 004





"Gramin Krishi Mausam Seva"

Tomato		Vegetative				- Light watering may be done to maintain soil moisture.		
Garden pea/ Broa	ad	Vegetative to			- Light watering may be done to maintain soil moisture.			
bean		flowering				- Earthing up and top dressing with 20kg urea per ha followed by watering may		
						be advised to the farmers.		
				powdery mildew		- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow		
				and yellow rust		rust especially to the crops grown in moist/ shady area.		
Onion		Vegetative				- Give light irrigation if the soil is dry.		
						- 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/		
						sangam depending upon the fertility.		
Cauliflower		Vegetative to head formation				- Light watering may be done to maintain soil moisture.		
				Plutella, Daimond		Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval		
				Black Moth		depending upon the severity of the infestation.		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
						- For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended		
		37				to protect against soil borne diseases.		
Spinach (Palak)		Vegetative				- Light watering may be done to maintain soil moisture.		
Animal Sciences								
Name of the anim								
Poultry	Al	l age groups	Care &	& management		Protect from intense cold. Keep the shed wall covered with hessian cloth during night		
(Chicken/						per ventilation must be provided to protect from moisture inside the shed. Litter		
Turkey/ Duck)			D 11	1 . 11		must be kept dry. 1. F-1 Strain may be first administered within 7 days of age and second dose may be		
			Ranık	het disease				
						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). 		
			Damanina			Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with		
Sheep/ Goat	Δ1	All age groups excepts the		Deworming Vaccination		half the dose at regular interval of 3 weeks.		
Sheep/ Goat						cinate against sheep/ goat pox and Enterotoxaemia.		
		ung ones	v accination		v ac	cinate against sheep goat pox and Enterotoxachia.		
			De-worming		>	De-worming of animals should be done using Abendazole/ Levamisole @7.5		
	Al	All age groups except the young ones		Care and management		mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
D'.						Mineral mixture be added in feed @ 10-20 g/adult animal.		
Pig						> Treat drinking water with potassium permanganate/ sanitizer.		
						Provide ample ventilation in the shed/dry bedding. Avoid dampness in sheds		
		All age groups excepts the young ones		Mites infestation		Spray with Skin Heal Spray in sufficient quantity.		
Cattle				rming		➤ Give Piperazine liquid @ 10-15ml orally once only.		
Cattle	ex					➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	yo			B.Q./ H.S/FMD		Foot & Mouth Disease, etc.		
			Ectoparasites		But	Butox@ 2ml/lit of water at forth nightly interval.		
Fishery: Type of Farming								
		Harvesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 000/ ha.		
culture		stock maintenance				eds should be provided @ 3 % body weight per day.		
	mair					ell balanced feed fortified with vitamins and minerals should be provided.		
					- Ap	pply Lime @ 30-35 kg/ha at 30days interval.		