

Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 23rd December, 2016

Churachandpur

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Churachandpur (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 21 – 23 $^{\rm o}$ C & minimum temp. 8 - 9 $^{\rm o}$ C. Relative humidity may reach up to 100 % (max RH) & 40 % (min RH). The average wind speed may be 3-4 km/hr. Wind direction may be South Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	-	.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing	, ,	 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 Land preparation for sowing rabi maize may be started. Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		- Transplant 26-30 days old seedlings (4 leaves stage) cole crops If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.
		+	







Broccoli		Transplantir Vegetative	Transplanting to Vegetative			- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato	Tomato Transplanting vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
				Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad	Vegetative				- Light watering may be done to maintain soil moisture.		
bean				powdery mildev	V	- 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				- 45-60 days old onion seedlings may be transplanted.		
						- Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.		
Cauliflower		Transplanting to vegetative				- Transplanting of 26-30 days old seedlings may be done Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms Light watering may be done to maintain soil moisture.		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.		
Animal Science								
Name of the anir								
Poultry (Chicken/ Turkey/ Duck)	Al	ll age groups	Care &	Pro		ect from intense cold. Keep the shed wall covered with hessian cloth during night. per ventilation must be provided to protect from moisture inside the shed. Litter t be kept dry.		
* ,			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	ex	ll age groups cepts the	Coccidiosis			Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.		
	yc	oung ones	Vaccination		Vac	cinate against sheep/ goat pox and Enterotoxaemia.		
	A.1	11 000 000000	De-we	worming		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.		
Pig	ex	Il age groups cept the oung ones	Care and management		>	Mineral mixture be added in feed @ 10-20 g/adult animal. Treat drinking water with potassium permanganate/ sanitizer.		
			Mites infestation			 Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds Spray with Skin Heal Spray in sufficient quantity. 		
	Δ1	ll age groups	Dewo			Give Piperazine liquid @ 10-15ml orally once only.		
	ex	cepts the	25110		 If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia 			
		oung ones	B.Q./	H.S/FMD		Foot & Mouth Disease, etc.		
Cottle		·	Ectop	arasites		Butox@ 2ml/lit of water at forth night.		
Cattle			Care &	& management	Oat/	Bersum seeds must be sown from the middle of this month.		
			Masti			quate care must be taken to prevent occurrence of Masitis.		
			Masti		udde	protect in-milk animals, all their milk should be removed and after milking, their ers should be cleaned with disinfectant.		
			Diarrh	noea & Acidosis	Lim	ited quantity of green fodder must be given in animal feed.		
Fishery: Type of Farming								
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 100/ ha.		
culture	stoc	k ntenance			- W	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.		



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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 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Senapati (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 18 – 20 $^{\rm o}$ C & minimum temp. 5 - 7 $^{\rm o}$ C. Relative humidity may reach up to 99 % (max RH) & 47 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	I		
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplanting to Vegetative				- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato	Transplanting and vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
				Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad	Vegetative				- Light watering may be done to maintain soil moisture.		
bean				powdery mildev	V	- 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				 - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land an manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. 		
Cauliflower		Transplanting to vegetative				 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture. 		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.		
Animal Science		<u> </u>						
Name of the anim								
Poultry (Chicken/ Turkey/ Duck)		All age groups Care &		Pro		ect from intense cold. Keep the shed wall covered with hessian cloth during night. ber ventilation must be provided to protect from moisture inside the shed. Litter t be kept dry.		
			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	ex	l age groups cepts the	Coccidiosis		,	Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.		
	yo	ung ones	Vaccination		Vaco	cinate against sheep/ goat pox and Enterotoxaemia.		
	A1	1 000 000000	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	ex	l age groups 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.		
	+	-	Mitas	infestation		 Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds Spray with Skin Heal Spray in sufficient quantity. 		
	Al	l age groups				Give Piperazine liquid @ 10-15ml orally once only.		
		cepts the		<i>O</i>		If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	yo	ung ones		H.S/FMD		Foot & Mouth Disease, etc.		
Cattle			Ectop	arasites	Buto	ox@ 2ml/lit of water at forth night.		
Cattle			Care &	& management		Bersum seeds must be sown from the middle of this month.		
			Masti			quate care must be taken to prevent occurrence of Masitis.		
			Masti	tis		protect in-milk animals, all their milk should be removed and after milking, their		
			Diarrh	noea & Acidosis		ers should be cleaned with disinfectant. ited quantity of green fodder must be given in animal feed.		
			Diam	ioca & Acidosis	Lilli	ned qualitity of green fouder must be given in animal feed.		
Fishery: Type of Farming								
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 00/ ha.		
culture stock maintenant						eds should be provided @ 3 % body weight per day. ell balanced feed fortified with vitamins and minerals should be provided.		



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Tamenglong

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Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Tamenglong (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 22 – 24 $^{\circ}$ C & minimum temp. 8 - 10 $^{\circ}$ C. Relative humidity may reach up to 100 % (max RH) & 47 % (min RH). The average wind speed may be 3-5 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	"	.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops	·	<u>-</u>	
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplanting to Vegetative		- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato	Tomato Transplantin vegetative			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
			Early Blight	- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad Vegeta	tive		- Light watering may be done to maintain soil moisture.		
bean			powdery milder 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	Vegeta	ive	,	- 45-60 days old onion seedlings may be transplanted.		
Omon	, ogetti			 Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. 		
Cauliflower	Transpl vegetat	anting to ive		 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture. 		
Coriander	Vegeta	ivo		- Light watering may be done to maintain soil moisture. - Light watering may be done to maintain soil moisture.		
Spinach (Palak		live		- Light watering may be done to maintain soil moisture.		
Animal Science						
Name of the anim		Como	& management	Protect from intense cold. Keep the shed wall covered with hessian cloth during night.		
Poultry (Chicken/ Turkey/ Duck)	All age gro	ups Care	& management	Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry.		
Turney, Duen,		Dew	orming	➤ 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 gro excepts the	•	idiosis	Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.		
	young ones		ination	Vaccinate against sheep/ goat pox and Enterotoxaemia.		
	All age gro		vorming	➤ 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	and management	 Mineral mixture be added in feed @10-20 g/adult animal. Treat drinking water with potassium permanganate/ sanitizer. 		
	, 3:		· : £4-4:	Provide ample ventilation in the shed/dry bedding. Avoid dampness in sheds		
	A11 aga ga-		s infestation	 Spray with Skin Heal Spray in sufficient quantity. Give Piperazine liquid @ 10-15ml orally once only. 		
	All age gro excepts the		лишу	➤ Give Piperazine iiquid @ 10-15mi orany once only. ➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	young ones		H.S/FMD	Foot & Mouth Disease, etc.		
	J		parasites	Butox@ 2ml/lit of water at forth night.		
Cattle				Oat/ Bersum seeds must be sown from the middle of this month.		
		Mast	& management	Adequate care must be taken to prevent occurrence of Masitis.		
		Mast		To protect in-milk animals, all their milk should be removed and after milking, their		
		Mast	1013	udders should be cleaned with disinfectant.		
		Diar	hoea & Acidosis	Limited quantity of green fodder must be given in animal feed.		
Fishery: Type of Farming						
-, pr or z mriming	II (*			- Stocking of fish for next year may be done in ponds having 1.5m water depth @		
Carp/ Catfish		na I		10,000/ ha.		
Carp/ Catfish culture	Harvesting an stock	ia		- Feeds should be provided @ 3 % body weight per day.		



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Thoubal

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Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Thoubal (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. $20-22\,^{\circ}\,\text{C}$ & minimum temp. 8- $10\,^{\circ}\,\text{C}$. Relative humidity may reach up to $100\,\%$ (max RH) & $57\,\%$ (min RH). The average wind speed may be 2-6 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	I		
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops	•	·	
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		ransplantin	ng to			- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.	
Tomato Transplantin vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
				Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.	
Garden pea/ Bro	ad V	egetative				- Light watering may be done to maintain soil moisture.	
bean				powdery mildev	V	- 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	V	egetative				 - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. 	
Cauliflower		Transplanting to vegetative					- Transplanting of 26-30 days old seedlings may be done Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms Light watering may be done to maintain soil moisture.
Coriander	V	egetative				- Light watering may be done to maintain soil moisture.	
Spinach (Palak		egetative				- Light watering may be done to maintain soil moisture.	
Animal Science	/	-6					
Name of the anin					ļ		
Poultry (Chicken/ Turkey/ Duck)		ge groups	Care &	k management	Prop	ect from intense cold. Keep the shed wall covered with hessian cloth during night. er ventilation must be provided to protect from moisture inside the shed. Litter be kept dry.	
•		All age groups Coccie		Deworming		Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with nalf the dose at regular interval of 3 weeks.	
Sheep/ Goat	excep			Coccidiosis		Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.	
	young	gones	Vaccination		Vacc	inate against sheep/ goat pox and Enterotoxaemia.	
			De-wo	De-worming		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.	
D'.		All age groups except the young ones		Care and management		Mineral mixture be added in feed @10-20 g/adult animal.	
Pig						Freat drinking water with potassium permanganate/ sanitizer.	
	young	ones			> I	Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds	
			Mites	infestation	> 5	Spray with Skin Heal Spray in sufficient quantity.	
		ge groups	Dewo	rming		Give Piperazine liquid @ 10-15ml orally once only.	
	excep		D C			If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,	
	young	gones		H.S/FMD		Foot & Mouth Disease, etc.	
Cattle			_	arasites		x@ 2ml/lit of water at forth night.	
= -/				k management		Bersum seeds must be sown from the middle of this month.	
			Mastit			uate care must be taken to prevent occurrence of Masitis.	
			Mastit	1S		rotect in-milk animals, all their milk should be removed and after milking, their	
			Diarrh	oea & Acidosis		rs should be cleaned with disinfectant. ted quantity of green fodder must be given in animal feed.	
			Diam	oca & Acidosis	LIIII	ted quantity of green found must be given in animal reed.	
Fishery: Type of Farming							
Carp/ Catfish	Harvest	ing and			10,00	cking of fish for next year may be done in ponds having 1.5m water depth @ 00/ ha.	
culture	stock					ds should be provided @ 3 % body weight per day.	
	mainten	ance				ll balanced feed fortified with vitamins and minerals should be provided. ply Lime @ 30-35 kg/ha at 30days interval.	



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 23rd December, 2016

Ukhrul

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}$ to 22^{nd} December, 2016)

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Ukhrul (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 18 – 20 $^{\circ}$ C & minimum temp. 5 - 7 $^{\circ}$ C. Relative humidity may reach up to 99 % (max RH) & 52 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be South-Westerly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate for at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		ļi.	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 Land preparation for sowing rabi maize may be started. Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops		<u>-</u>	
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplanting to Vegetative				- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato	Transplanting and vegetative				- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.			
				Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad	Vegetative				- Light watering may be done to maintain soil moisture.		
bean				powdery mildev	v	- 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				 - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land an manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. 		
Cauliflower		Transplanting to vegetative				 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture. 		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.		
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.		
Animal Science								
Name of the anim								
Poultry (Chicken/ Turkey/ Duck)		All age groups Care &		Pro		ect from intense cold. Keep the shed wall covered with hessian cloth during night. ber ventilation must be provided to protect from moisture inside the shed. Litter to be kept dry.		
			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	ex	l age groups cepts the	Coccidiosis			Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.		
	yo	ung ones	Vaccination		Vaco	cinate against sheep/ goat pox and Enterotoxaemia.		
	Α1	l aga 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	ex	l age groups 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.		
	+		Mites infestation			 Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds Spray with Skin Heal Spray in sufficient quantity. 		
	Al	l age groups				Give Piperazine liquid @ 10-15ml orally once only.		
		cepts the		<i>O</i>		If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,		
	yo	ung ones		H.S/FMD		Foot & Mouth Disease, etc.		
Cattle			Ectop	arasites	Buto	ox@ 2ml/lit of water at forth night.		
Cattle				& management		Bersum seeds must be sown from the middle of this month.		
			Masti			quate care must be taken to prevent occurrence of Masitis.		
			Masti	tis		protect in-milk animals, all their milk should be removed and after milking, their		
			Diarrh	noea & Acidosis		ers should be cleaned with disinfectant. ited quantity of green fodder must be given in animal feed.		
						4		
Fishery: Type of Farming								
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 00/ ha.		
culture stock maintena		:			eds should be provided @ 3 % body weight per day. ell balanced feed fortified with vitamins and minerals should be provided.			



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 23rd December, 2016

Imphal East

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Imphal East (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. $21-23\,^{\circ}$ C & minimum temp. $8-10\,^{\circ}$ C. Relative humidity may reach up to $100\,$ % (max RH) & $51\,$ % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	 Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplantir Vegetative	Transplanting to Vegetative			- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.	
Tomato	Tomato Transplanting vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.	
				Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.	
Garden pea/ Bro	ad	Vegetative				- Light watering may be done to maintain soil moisture.	
bean				powdery mildev	V	- 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				- 45-60 days old onion seedlings may be transplanted.	
						- Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.	
Cauliflower		Transplanting to vegetative				 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture. 	
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.	
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.	
Animal Science							
Name of the anir							
Poultry (Chicken/ Turkey/ Duck)	Al	ll age groups	Care &	Pro		ect from intense cold. Keep the shed wall covered with hessian cloth during night. per ventilation must be provided to protect from moisture inside the shed. Litter t be kept dry.	
•			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	ex	ll age groups cepts the	Coccidiosis			Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.	
	yo	oung ones	Vaccination		Vac	cinate against sheep/ goat pox and Enterotoxaemia.	
	A 1	11 000 000000	De-we	-worming		De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.	
Pig	ex	Il age groups cept the oung ones	Care and management		>	Mineral mixture be added in feed @ 10-20 g/adult animal. Treat drinking water with potassium permanganate/ sanitizer.	
			Mites infestation			Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds Spray with Skin Heal Spray in sufficient quantity.	
	Δ1	ll age groups	Dewo			Give Piperazine liquid @ 10-15ml orally once only.	
	ex	cepts the	25110		 If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia 		
		oung ones	B.Q./	H.S/FMD		Foot & Mouth Disease, etc.	
Cottle		·	Ectop	arasites	Butox@ 2ml/lit of water at forth night.		
Cattle			Care &	& management	Oat/	Bersum seeds must be sown from the middle of this month.	
			Masti			quate care must be taken to prevent occurrence of Masitis.	
			Masti		udde	protect in-milk animals, all their milk should be removed and after milking, their ers should be cleaned with disinfectant.	
			Diarrh	noea & Acidosis	Lim	ited quantity of green fodder must be given in animal feed.	
Fishery: Type of Farming							
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 1000/ ha.	
culture	stoc	k ntenance			- W	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 23rd December, 2016

Imphal West

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Imphal West (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 22 – 23 $^{\circ}$ C & minimum temp. 8 - 10 $^{\circ}$ C. Relative humidity may reach up to 100 % (max RH) & 48 % (min RH). The average wind speed may be 2-6 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops		.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	 Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. -It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplanting to Vegetative			- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato Transplantin vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
			Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad	Vegetative	e			- Light watering may be done to maintain soil moisture.	
bean				powdery mildev	V	- 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				- 45-60 days old onion seedlings may be transplanted.	
						- Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.	
Cauliflower Transplanting vegetative		ng to			 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture. 		
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.	
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.	
Animal Science							
Name of the anim							
Poultry (Chicken/ Turkey/ Duck)	Al			Pro		ect from intense cold. Keep the shed wall covered with hessian cloth during night. per ventilation must be provided to protect from moisture inside the shed. Litter t be kept dry.	
•			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	ex	All age groups excepts the young ones		Coccidiosis		Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.	
	yo			Vaccination		cinate against sheep/ goat pox and Enterotoxaemia.	
			De-worming			De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.	
Pig All age group except the young ones		cept the	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 Spray with Skin Heal Spray in sufficient quantity.	
	Δ1	All age groups excepts the young ones B.Q./		Mites infestation Deworming		Give Piperazine liquid @ 10-15ml orally once only.	
	ex			Deworming		➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,	
				B.Q./ H.S/FMD		Foot & Mouth Disease, etc.	
Cattle				Ectoparasites		ox@ 2ml/lit of water at forth night.	
				e & management		Bersum seeds must be sown from the middle of this month.	
				itis A		quate care must be taken to prevent occurrence of Masitis.	
						protect in-milk animals, all their milk should be removed and after milking, their ers should be cleaned with disinfectant.	
			Diarrh	noea & Acidosis Lim		ited quantity of green fodder must be given in animal feed.	
Fishery: Type of Farming							
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 1000/ ha.	
culture stock maintenance				- W	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 23rd December, 2016

Bishnupur

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Bishnupur (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 21 – 22 $^{\rm o}$ C & minimum temp. 7 - 9 $^{\rm o}$ C. Relative humidity may reach up to 100 % (max RH) & 53 % (min RH). The average wind speed may be 2-6 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	"	.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	- Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 Land preparation for sowing rabi maize may be started. Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli	Transplantir Vegetative	ng to		- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.
Tomato Transplantin vegetative		ng and		- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.
		Early Bli	ght	- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.
Garden pea/ Bro	oad Vegetative	ve		- Light watering may be done to maintain soil moisture.
bean		powdery		- 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				 - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.
Cauliflower Transplanting vegetative		ng to		 Transplanting of 26-30 days old seedlings may be done. Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. Light watering may be done to maintain soil moisture.
Coriander	Vegetative			- Light watering may be done to maintain soil moisture.
Spinach (Palak				- Light watering may be done to maintain soil moisture.
Animal Science				
Name of the anir				
Poultry (Chicken/ Turkey/ Duck)	All age groups	Care & managen	Pro	otect from intense cold. Keep the shed wall covered with hessian cloth during night. Oper ventilation must be provided to protect from moisture inside the shed. Litter st be kept dry.
		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	Coccidiosis		Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.
	young ones	Vaccination		ccinate against sheep/ goat pox and Enterotoxaemia.
	All			De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
Pig All age grou except the young ones		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.
	All age groups			Give Piperazine liquid @ 10-15ml orally once only.
	excepts the			If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,
	young ones	B.Q./ H.S/FMD		Foot & Mouth Disease, etc.
Cattle		Ectoparasites		tox@ 2ml/lit of water at forth night.
Cattle		Care & managen		t/ Bersum seeds must be sown from the middle of this month.
		Mastitis		equate care must be taken to prevent occurrence of Masitis.
		Mastitis		protect in-milk animals, all their milk should be removed and after milking, their
		Diarrhoea & Aci		ders should be cleaned with disinfectant. nited quantity of green fodder must be given in animal feed.
		Diamioca & rei	dosis Em	inted quantity of green found intuitive green in animal reed.
Fishery: Type of Farming				
				tocking of fish for next year may be done in ponds having 1.5m water depth @
Carp/ Catfish	Harvesting and			000/ ha.
culture	stock maintenance			eeds should be provided @ 3 % body weight per day. Vell balanced feed fortified with vitamins and minerals should be provided.



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN 23rd December, 2016

Chandel

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 24th to 28th December, 2016 as below:

Significant past weather for the preceding bi-weekly of Imphal - West $(20^{th}\ to\ 22^{nd}\ December,\ 2016)$

Nursery raising

Cole crops

Observed partly cloudy to cloudy but mainly clear sky during morning hours of $22^{\rm nd}$ Dec and no rainfall in the past three days. Maximum temperature range of 20.0 to 23.3 $^{\circ}$ C and a rise in Minimum temperature from 10.0 to 11.3 $^{\circ}$ C with mean relative humidity 90.0 % max and 61.7 % min was recorded in the past four days. The average wind speed range remained 3.0 to 5.0 km/hr.

Weather forecast for next five days of Chandel (24th to 28th December, 2016)

Likely to have no rain upto Wednesday. Shallow to moderate at few places very likely over Manipur during next 2 days and mainly clear sky during afternoon hours with maximum temp. 22 – 24 $^{\rm o}$ C & minimum temp. 7 - 9 $^{\rm o}$ C. Relative humidity may reach up to 99 % (max RH) & 57 % (min RH). The average wind speed may be 2-5 km/hr. Wind direction may be North Easterly during next five days.

Weather Forecast for next 5 days * upto 0830 hours IST of 28th December, 2016 Shallow to Moderate fog at isolated places very likely over Manipur during next 2 days

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Field Crops	"	.!	
Potato	Early vegetative		- Light watering during morning hours may be done to keep soil moist for good early vegetative growth.
		Early Blight	- Spray Mancozeb and Chlorothalonil at 7-10 days interval against early blight.
Rapeseed/ Mustard	Vegetative and late sowing		 Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. After 10-15 days of sowing plant to plant distance may be maintained at 10-15cm by thinning. Irrigation may be given at 30-35 days after sowing if the soil moisture have decline. Top dress with ½ N (@ 66kg Urea/ ha) just after irrigation. Late sowing may be done if available soil moisture is as much that impression of finger on the soil when pressed. Mulch the field with straw after sowing.
		Hairy caterpillar	 Spray Quinalphos or Chloropyriphos @ 2ml/litre of water on the infected patches only.
		Aphid	- Spray Monocrotophos @ 1.5 ml/lit of water to the infected patches only.
Pulses	Vegetative and late sowing		 Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. Late sowing may be done. Avoid plucking off of young shoots of pea plant. Plant to plant distance may be maintained by thinning.
		Rust or Powdery mildew	- Spray Propiconazole @ 15ml/ 15 litre water.
		Aphid	 Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used.
Rabi maize	Land preparation to sowing		 Land preparation for sowing rabi maize may be started. Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. It may be intercropped with rapeseed/lentil/pea.
Seeds storage	Post harvest management		➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns.
Horticulture Crops			
Cucurbits	Nursery raising		- Prepare for raising nursery of cucurbits like water-melon, cucumber, sponge gourd, pumpkin, etc. in poly-pouch and trays under polyhouse.
Rabi Vegetable (cole crops)	Transplanting and vegetative		 Transplant 26-30 days old seedlings (4 leaves stage) cole crops. If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/10 lit of water.







Broccoli		Transplanting to Vegetative			- Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with 30x45 cm plant spacing.		
Tomato Transplantin vegetative		ng and			- Avoid transplanting of tomato in the bed/ plots where chilli/ brinjal were previously grown. It is better to plant it where the previous crop was rice, maize, etc. to avoid bacterial wilt.		
			Early Blight		- As prophylactic and curative measure against early blight, apply Dichlorovos @ 0.5ml/ litre of water or Imidachlorpid @ 2ml/ 5 litres of water. Also apply Dithane M 45 @ 2g/ litre of water.		
Garden pea/ Bro	ad	Vegetative	÷			- Light watering may be done to maintain soil moisture.	
bean				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				- 45-60 days old onion seedlings may be transplanted.	
						- Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established.	
Cauliflower	Cauliflower Transplanting vegetative		ng to			- Transplanting of 26-30 days old seedlings may be done Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos</i> (1.5%) dust @25 kg /ha to the cauliflower/ cabbage infested by cut-worms Light watering may be done to maintain soil moisture.	
Coriander		Vegetative				- Light watering may be done to maintain soil moisture.	
Spinach (Palak)	Vegetative				- Light watering may be done to maintain soil moisture.	
Animal Science							
Name of the anir							
Poultry (Chicken/ Turkey/ Duck)	Al			Proj		ect from intense cold. Keep the shed wall covered with hessian cloth during night. per ventilation must be provided to protect from moisture inside the shed. Litter t be kept dry.	
•			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	ex	All age groups excepts the young ones		Coccidiosis		Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days.	
	yo			Vaccination		cinate against sheep/ goat pox and Enterotoxaemia.	
			De-worming			De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.	
Pig All age grou except the young ones		cept the	Care and management		>	Mineral mixture be added in feed @ 10-20 g/adult animal. Treat drinking water with potassium permanganate/ sanitizer.	
			Mitag infactation			Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds	
	Δ1	All age groups excepts the young ones B.Q./ I Ectopa Care & Mastiti Mastiti		Mites infestation Deworming		Spray with Skin Heal Spray in sufficient quantity. Give Piperazine liquid @ 10-15ml orally once only.	
	ex			Deworming		➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia,	
				B.Q./ H.S/FMD		Foot & Mouth Disease, etc.	
Cattle				Ectoparasites		ox@ 2ml/lit of water at forth night.	
				& management (Bersum seeds must be sown from the middle of this month.	
				itis A		quate care must be taken to prevent occurrence of Masitis.	
						protect in-milk animals, all their milk should be removed and after milking, their ers should be cleaned with disinfectant.	
				noea & Acidosis Lin		ited quantity of green fodder must be given in animal feed.	
Fishery: Type of Farming							
Carp/ Catfish		vesting and			10,0	ocking of fish for next year may be done in ponds having 1.5m water depth @ 1000/ ha.	
culture stock maintenance					- W	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.	