

### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### 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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. 3.4~mm rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0~^{\circ}\text{C},$  range of minimum temperature observed was  $22.0-23.4~^{\circ}\text{C},$  mean relative humidity observed in morning and afternoon were 71.0~% and 58.3~% respectively. The average wind speed range was 0.6-1.1~km/hr.

Weather forecast for next five days of Chandel (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $32.0-34.0\,^{\circ}\text{C}$  & minimum temp.  $22.0-23.0\,^{\circ}\text{C}$ . Relative humidity may reach a maximum of  $100\,\%$  (maximum RH) & 87 % (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	,		
Rice	Transplanting to tillering of <i>Main Kharif</i>	Thrips & Leaf	<ul> <li>Maintain water level of 5-8cm.</li> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Spray Lambdacyhothrin @ 15 ml/ pump.</li> </ul>
Maize	Kharif Maize: Cob maturity to harvesting	folder	- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	J		, 8
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



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Name of the ar	nimal	Gro	wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry			susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat			ve 3 months of	Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
			(as and when	Ectoparasite	accompanied with Livozyme @ 50ml daily.	
		requ	ired)	H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig	ig		ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
Cattle / Buffa Mithun	alo/	Above 3 months of age (as and when		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
		required)		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:					Give Minamil powder @ 20g twice daily in feed.	
Type of Farming	Stage		Management	Agro-metrological advisor	ies	
Carp	Breed	ling			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture				depth should be mainta		
				Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be	
	Caron		Pond and	Degular manusing at	ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha. interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of	
	Grow out	-	water	pond water at 7.0-7.5.	Greenish colouration of water is desirable. If any change in colour, odour ter should be drain out and replace with fresh water.	
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body	
					an be fed at 2-3 times a day.	
Paddy cum	Water management		agement	- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil		
fish culture	_				entary feed. Avoid insecticide/pesticide application.	
Cat fish (Ngakra)	Breed	ling			va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature <i>agur</i> weighing 230 g-300 g for breeding.	
	Wate	r man	agement	- Water depth should b	be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with initial and 500-800 kg/ha at 15 days interval.	
	Feed	& Fis	h		in content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be	



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#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### 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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\ ^{\circ}\text{C},$  range of minimum temperature observed was  $22.0-23.4\ ^{\circ}\text{C},$  mean relative humidity observed in morning and afternoon were  $71.0\ \%$  and  $58.3\ \%$  respectively. The average wind speed range was  $0.6-1.1\ \text{km/hr}.$ 

Weather forecast for next five days of Churachandpur (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $31.0-33.0~^{\circ}\text{C}$  & minimum temp.  $21.0-22.0~^{\circ}\text{C}$ . Relative humidity may reach a maximum of 100~% (maximum RH) & 92~% (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	J		
Rice	Transplanting to tillering of <i>Main Kharif</i>	Thrips & Leaf	<ul> <li>Maintain water level of 5-8cm.</li> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Spray Lambdacyhothrin @ 15 ml/ pump.</li> </ul>
Maize	Kharif Maize: Cob maturity to harvesting	folder	- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars  Tikka disease	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water) Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	<u>'</u>		
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose Fruit fly	- Spray Carbendazim + Mancozeb @ 1mg/ lit water Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



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Name of the ar	nimal	Gro	wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry		Alls	susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
·		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat		age	ve 3 months of (as and when ired)	Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.	
				H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		age	ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a wee while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnan sow @ 20g and 20ml resp. in feed.	
Cattle / Buffa Mithun	alo/	Above 3 months of age (as and when		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
required)  Fishery:		required)		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution a fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
			Give Minamil powder @ 20g twice daily in feed.			
Type of Farming	Stage		Management	Agro-metrological advisor	ies	
Carp	Breed	reeding Pond and			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture				depth should be mainta		
					f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be a. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow	· -	Pond and water	- Regular manuring at pond water at 7.0-7.5.	interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of Greenish colouration of water is desirable. If any change in colour, odour ter should be drain out and replace with fresh water.	
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
				- Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body		
				weight per day. Feed can be fed at 2-3 times a day.		
Paddy cum fish culture	Water management				ter depth of the trenches in paddy field. Provide rice bran and mustard oil entary feed. Avoid insecticide/pesticide application.	
Cat fish	Breed	ling			va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature	
(Ngakra)				and healthy Clarias ma	agur weighing 230 g-300 g for breeding.	
	Water	r man			be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with initial and 500-800 kg/ha at 15 days interval.	
	Feed	& Fis	h		in content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be	



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Weather forecast for next five days of Imphal-West (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $30.0-32.0\,^{\circ}\text{C}$  & minimum temp. 22.0 °C. Relative humidity may reach a maximum of 100 % (maximum RH) & 87 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	<u>'</u>		,
Rice	Transplanting to tillering of <i>Main</i>		<ul> <li>Maintain water level of 5-8cm.</li> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of</li> </ul>
	Kharif		transplanting. Drain in water after 48hrs of top-dressing.
	·	Thrips & Leaf folder	- Spray Lambdacyhothrin @ 15 ml/ pump.
Maize	Kharif Maize: Cob maturity to harvesting		- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	<u>'</u>		, <u> </u>
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



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Name of the an			wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry			susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat	t		ve 3 months of	Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
			(as and when ired)	Ectoparasite	accompanied with Livozyme @ 50ml daily.	
		requ	neu)	H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		age (	ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
Cattle / Buffalo/ Mithun					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
		Above 3 months of age (as and when required)		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
				Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:	isherv:			Give Minamil powder @ 20g twice daily in feed.		
Type of Farming	Stage		Management	Agro-metrological advisor	ies	
Carp	Breed	ling			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture				depth should be mainta		
				Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow	-	Pond and water	- Regular manuring at pond water at 7.0-7.5.	interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of Greenish colouration of water is desirable. If any change in colour, odour	
					ter should be drain out and replace with fresh water.	
				-	ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body an be fed at 2-3 times a day.	
Paddy cum	Water management			- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil		
fish culture	ator managomont				entary feed. Avoid insecticide/pesticide application.	
Cat fish (Ngakra)	Breed	ling		- Inject Ovitide or Wov	va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature <i>agur</i> weighing 230 g-300 g for breeding.	
	Water	r man	agement	- Water depth should b	e maintained at 0.5m -0.8m for nurseries. Ponds should be manured with	
	Feed	Geed & Fish		RCD @ 5000 kg/ha at initial and 500-800 kg/ha at 15 days interval.  - Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		



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Rice	Transplanting to tillering of <i>Main</i>		<ul> <li>- Maintain water level of 5-8cm.</li> <li>- One hand weeding may be done at 20-30 days after transplanting.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of</li> </ul>
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		Thrips & Leaf folder	- Spray Lambdacyhothrin @ 15 ml/ pump.
Maize	Kharif Maize: Cob maturity to harvesting		- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	<u>'</u>		
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
<b>Passion fruit</b>	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Name of the an			wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry			susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat	t		ve 3 months of	Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
			(as and when ired)	Ectoparasite	accompanied with Livozyme @ 50ml daily.	
		requ	neu)	H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		age (	ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
Cattle / Buffa Mithun	alo/	Above 3 months of age (as and when		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
		required)		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:	ish <i>or</i> v:			Give Minamil powder @ 20g twice daily in feed.		
Type of Farming	Stage Management		Management	Agro-metrological advisor	ies	
Carp	Breed	ling			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture				depth should be mainta		
			Fish	Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow	-	Pond and water	- Regular manuring at pond water at 7.0-7.5.	interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of Greenish colouration of water is desirable. If any change in colour, odour	
					ter should be drain out and replace with fresh water.	
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body an be fed at 2-3 times a day.	
Paddy cum	Water management				ter depth of the trenches in paddy field. Provide rice bran and mustard oil	
fish culture					entary feed. Avoid insecticide/pesticide application.	
Cat fish (Ngakra)	Breed	ling			va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature agur weighing 230 g-300 g for breeding.	
- ′	Water	r man	agement	- Water depth should b	e maintained at 0.5m -0.8m for nurseries. Ponds should be manured with	
	Feed	Geed & Fish		RCD @ 5000 kg/ha at initial and 500-800 kg/ha at 15 days interval.  - Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### 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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\ ^{\circ}\text{C},$  range of minimum temperature observed was  $22.0-23.4\ ^{\circ}\text{C},$  mean relative humidity observed in morning and afternoon were  $71.0\ \%$  and  $58.3\ \%$  respectively. The average wind speed range was  $0.6-1.1\ \text{km/hr}.$ 

Weather forecast for next five days of Senapati (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $30.0-32.0\,^{\circ}\text{C}$  & minimum temp.  $20.0-22.0\,^{\circ}\text{C}$ . Relative humidity may reach a maximum of 99 % (maximum RH) & 83 % (minimum RH). The average wind speed may be 0-2 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	,		
Rice	Transplanting to tillering of Main Kharif		<ul> <li>Maintain water level of 5-8cm.</li> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days o transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Thrips & Leaf folder	- Spray Lambdacyhothrin @ 15 ml/ pump.
Maize	Kharif Maize: Cob maturity to harvesting		- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	<u> </u>		grams, seeds in their tenning gods this
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Prope drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit o water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Name of the an			wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry			susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat	t		ve 3 months of	Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
			(as and when ired)	Ectoparasite	accompanied with Livozyme @ 50ml daily.	
		requ	neu)	H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		age (	ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
Cattle / Buffalo/ Mithun					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
		Above 3 months of age (as and when required)		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
				Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:	isherv:			Give Minamil powder @ 20g twice daily in feed.		
Type of Farming	Stage		Management	Agro-metrological advisor	ies	
Carp	Breed	ling			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture				depth should be mainta		
				Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow	-	Pond and water	- Regular manuring at pond water at 7.0-7.5.	interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of Greenish colouration of water is desirable. If any change in colour, odour	
					ter should be drain out and replace with fresh water.	
				-	ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body an be fed at 2-3 times a day.	
Paddy cum	Water management			- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil		
fish culture	ator managomont				entary feed. Avoid insecticide/pesticide application.	
Cat fish (Ngakra)	Breed	ling		- Inject Ovitide or Wov	va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature <i>agur</i> weighing 230 g-300 g for breeding.	
	Water	r man	agement	- Water depth should b	e maintained at 0.5m -0.8m for nurseries. Ponds should be manured with	
	Feed	Geed & Fish		RCD @ 5000 kg/ha at initial and 500-800 kg/ha at 15 days interval.  - Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### **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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\,^{\circ}\text{C}$ , range of minimum temperature observed was  $22.0-23.4\,^{\circ}\text{C}$ , mean relative humidity observed in morning and afternoon were  $71.0\,\%$  and  $58.3\,\%$  respectively. The average wind speed range was  $0.6-1.1\,\text{km/hr}$ .

Weather forecast for next five days of Tamenglong (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $33.0-34.0\,^{\circ}\text{C}$  & minimum temp.  $22.0-23.0\,^{\circ}\text{C}$ . Relative humidity may reach a maximum of  $100\,\%$  (maximum RH) &  $88\,\%$  (minimum RH). The average wind speed may be  $2\,\text{km/hr}$  during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	1	-	,
Rice	TD 1 1		- Maintain water level of 5-8cm.
	Transplanting to tillering of <i>Main Kharif</i>		<ul> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> </ul>
		Thrips & Leaf folder	- Spray Lambdacyhothrin @ 15 ml/ pump.
Maize	Kharif Maize: Cob maturity to harvesting		- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	<u>'</u>		<u> </u>
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Name of the ar	nimal	Gro	wth stage	Disease/ infestation	Agro-meteorological advisories	
Poultry			susceptible age	Ranikhet disease	Vaccinate against Ranikhet disease.	
		groups (as and when required)		Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat	t		ve 3 months of	Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
			(as and when ired)	Ectoparasite	accompanied with Livozyme @ 50ml daily.	
				H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		age (	ve 3 months of (as and when	Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
		requ	ired)	Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
Cattle / Buffa Mithun	alo/	Above 3 months of age (as and when		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
		required)		Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:	n, •				Give Minamil powder @ 20g twice daily in feed.	
Type of Farming	Stage Management		Management	Agro-metrological advisor	ies	
Carp	Breed	Breeding Pond and			r having 7.0-7.8 pH free from unwanted vegetation and insects. Water	
culture			water	depth should be mainta		
			Fish	Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nursei	nurseries		maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow		Pond and		interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of	
	out	-	water	pond water at 7.0-7.5.	Greenish colouration of water is desirable. If any change in colour, odour ter should be drain out and replace with fresh water.	
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body	
				weight per day. Feed can be fed at 2-3 times a day.		
Paddy cum	Water management			- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil		
fish culture				cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.		
Cat fish (Ngakra)	Breed	ing		- Inject Ovitide or Wo	va-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature agur weighing 230 g-300 g for breeding.	
- /	Water	man	agement	- Water depth should b	be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with initial and 500-800 kg/ha at 15 days interval.	
Feed		eed & Fish		- Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### **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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\,^{\circ}\text{C}$ , range of minimum temperature observed was  $22.0-23.4\,^{\circ}\text{C}$ , mean relative humidity observed in morning and afternoon were  $71.0\,\%$  and  $58.3\,\%$  respectively. The average wind speed range was  $0.6-1.1\,\text{km/hr}$ .

Weather forecast for next five days of Thoubal (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $31.0-33.0~^{\circ}\text{C}$  & minimum temp.  $22.0-23.0~^{\circ}\text{C}$ . Relative humidity may reach a maximum of 100~% (maximum RH) & 91~% (minimum RH). The average wind speed may be 2-4 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	<u> </u>	,	·
Rice	Transplanting to tillering of <i>Main Kharif</i>	Thrips & Leaf	<ul> <li>- Maintain water level of 5-8cm.</li> <li>- One hand weeding may be done at 20-30 days after transplanting.</li> <li>- Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>- Spray Lambdacyhothrin @ 15 ml/ pump.</li> </ul>
Maize	Kharif Maize: Cob maturity to harvesting	folder	- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars  Tikka disease	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water) Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops			<u> </u>
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Animal Sciences Name of the animal		Growth stage		Disease/ infestation	Agro-meteorological advisories	
		All susceptible age groups (as and when required)		Ranikhet disease	Vaccinate against Ranikhet disease.	
				Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat		Above 3 months of age (as and when required)		Endoparasite/	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight	
				Ectoparasite	accompanied with Livozyme @ 50ml daily.	
				H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig  Cattle / Buffalo/ Mithun		Above 3 months of age (as and when required)  Above 3 months of age (as and when required)		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
				Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a week while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
				Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
				Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution at fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:					Give Minamil powder @ 20g twice daily in feed.	
Type of Farming	Stage Management		Management	Agro-metrological advisor	ies	
Carp	Breed	ling		- Clean and clear water having 7.0-7.8 pH free from unwanted vegetation and insects. Water		
culture				depth should be mainta		
				Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurseries			- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.		
	Grow Dond o		Pond and	- Regular manuring at interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of		
	Grow - out		water	pond water at 7.0-7.5. Greenish colouration of water is desirable. If any change in colour, odour of water half of the water should be drain out and replace with fresh water.		
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
	Feed				ortified with vitamins and minerals should be provided @ 3-5% body	
				weight per day. Feed can be fed at 2-3 times a day.		
Paddy cum	Water management		agement	- Maintained 1.0 m wa	ter depth of the trenches in paddy field. Provide rice bran and mustard oil	
fish culture	_				entary feed. Avoid insecticide/pesticide application.	
Cat fish (Ngakra)	Breed	Breeding		- Inject Ovitide or Wova-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature and healthy <i>Clarias magur</i> weighing 230 g-300 g for breeding.		
	Wate	Water management		- Water depth should b	be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with initial and 500-800 kg/ha at 15 days interval.	
	Feed & Fish		h		in content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be	



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### **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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\ ^{\circ}\text{C},$  range of minimum temperature observed was  $22.0-23.4\ ^{\circ}\text{C},$  mean relative humidity observed in morning and afternoon were  $71.0\ \%$  and  $58.3\ \%$  respectively. The average wind speed range was  $0.6-1.1\ \text{km/hr}.$ 

Weather forecast for next five days of Ukhrul (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $29.0-31.0\,^{\circ}\text{C}$  & minimum temp.  $20.0-22.0\,^{\circ}\text{C}$ . Relative humidity may reach a maximum of 99 % (maximum RH) & 83 % (minimum RH). The average wind speed may be 2-3 km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	<u> </u>		J
Rice	Transplanting to tillering of <i>Main Kharif</i>	Thrips & Leaf	<ul> <li>Maintain water level of 5-8cm.</li> <li>One hand weeding may be done at 20-30 days after transplanting.</li> <li>Drain out the water and apply 33kg of urea as top dress after 30days of transplanting. Drain in water after 48hrs of top-dressing.</li> <li>Spray Lambdacyhothrin @ 15 ml/ pump.</li> </ul>
Maize	Kharif Maize: Cob maturity to harvesting	folder	- Mature cobs may be harvested.
Soybean / Groundnut	Vegetative	Hairy caterpillars  Tikka disease	- Hand weeding should be done. Also, earthing-up may be done Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water) Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth. After proper drying, store grains/ seeds in well ventilated godowns.
Horticulture Crops	J <u>.</u>		<u>, c</u>
Early Cauliflower	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper drainage may be well constructed.
Cucurbits	Fruiting to harvesting	Powdery mildew/ Downey mildew	- Monitor for powdery mildew/ downey mildew. For minimum risk, fungicide must be sprayed as per scheduled time of interval as prophylactic measure. Canopy pruning (removal of unwanted leaves and foliage) may be done for proper aeration and sunshine.
Passion fruit	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1% Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of water.
Ginger & Turmeric	Rhizome initiation	Leaf spot & Soft rot in ginger and Rhizome rot in turmeric	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with Carbendazim @ 2g/lit water at 14 days interval Drain out excess water from the field.



### ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Name of the animal		Growth stage		Disease/ infestation	Agro-meteorological advisories	
Poultry		All susceptible age groups (as and when required)		Ranikhet disease	Vaccinate against Ranikhet disease.	
				Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat		Above 3 months of age (as and when required)		Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.	
				H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig  Cattle / Buffalo/ Mithun		Above 3 months of age (as and when required)  Above 3 months of age (as and when required)		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
				Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a weel while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnant sow @ 20g and 20ml resp. in feed.	
				Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
				Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution a fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
					Give Minamil powder @ 20g twice daily in feed.	
Fishery:						
Type of Farming	Stage		Management	Agro-metrological advisories		
Carp	Breed	ling	Pond and	- Clean and clear water having 7.0-7.8 pH free from unwanted vegetation and insects. Water		
culture				depth should be mainta		
					f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurseries			maintained at 1.0-1.5m	from unwanted vegetation and insects and water depth should be n. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be	
					ay @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.	
	Grow - out		water	- Regular manuring at interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of pond water at 7.0-7.5. Greenish colouration of water is desirable. If any change in colour, odour of water half of the water should be drain out and replace with fresh water.		
				- 8000-10,000 fingerlings/ha can be stocked. Sampling of fish should be done by regular netting.		
				- Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body		
				weight per day. Feed can be fed at 2-3 times a day.		
Paddy cum fish culture	Water management			- Maintained 1.0 m water depth of the trenches in paddy field. Provide rice bran and mustard oil cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.		
Cat fish	Breed	Breeding		- Inject Ovitide or Wova-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature		
(Ngakra)	Water management			and healthy <i>Clarias magur</i> weighing 230 g-300 g for breeding.		
			_	- Water depth should be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with RCD @ 5000 kg/ha at initial and 500-800 kg/ha at 15 days interval.		
	Feed & Fish			- Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		



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#### "Integrated Agromet Advisory Services"

#### MANIPUR BULLETIN 1<sup>st</sup> August, 2014

#### 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 2<sup>nd</sup> to 6<sup>th</sup> August, 2014 as given below:

Significant past weather for the preceding bi-weekly of Imphal - West (29<sup>th</sup> to 31<sup>st</sup> July, 2014)

During past three days sky was mainly clear to partly cloudy but mainly cloudy during afternoon hours of  $30^{th}$  July. **3.4 mm** rainfall was recorded during past three days. Maximum temperature range observed was  $33.5-34.0\ ^{\circ}\text{C},$  range of minimum temperature observed was  $22.0-23.4\ ^{\circ}\text{C},$  mean relative humidity observed in morning and afternoon were  $71.0\ \%$  and  $58.3\ \%$  respectively. The average wind speed range was  $0.6-1.1\ \text{km/hr}.$ 

Weather forecast for next five days of Bishnupur (2<sup>nd</sup> to 6<sup>th</sup> August, 2014)

There may be light rain upto Sunday then moderate to heavy rains upto Wednesday. Sky may be partly cloudy to cloudy with maximum temp. of  $31.0-32.0~^{\circ}\text{C}$  & minimum temp.  $22.0-23.0~^{\circ}\text{C}$ . Relative humidity may reach a maximum of 100~% (maximum RH) & 90~% (minimum RH). The average wind speed may be 2~km/hr during next five days.

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops	<u>,                                      </u>		
Rice			- Maintain water level of 5-8cm.
	Transplanting to		- One hand weeding may be done at 20-30 days after transplanting.
	tillering of Main		- Drain out the water and apply 33kg of urea as top dress after 30days of
	Kharif		transplanting. Drain in water after 48hrs of top-dressing.
		Thrips & Leaf folder	- Spray Lambdacyhothrin @ 15 ml/ pump.
Maize	Kharif Maize: Cob maturity to harvesting		- Mature cobs may be harvested.
Soybean /	Vegetative		- Hand weeding should be done. Also, earthing-up may be done.
Groundnut		Hairy caterpillars	- Avoid leaf eating caterpillars/ insects upto 60 days after sowing. For
			control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha to
			control it or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water).
		Tikka disease	- Spray Carbendazim @ 0.5g / lit of water to control Tikka disease in
			groundnut.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check
			for germination of seeds or fungal growth. After proper drying, store
			grains/ seeds in well ventilated godowns.
Horticulture Crops			
<b>Early Cauliflower</b>	Nursery		- Prepare temporary rain shelter to protect cauliflower nursery. Proper
			drainage may be well constructed.
Cucurbits	Fruiting to	Powdery mildew/	- Monitor for powdery mildew/ downey mildew. For minimum risk,
	harvesting	Downey mildew	fungicide must be sprayed as per scheduled time of interval as
			prophylactic measure. Canopy pruning (removal of unwanted leaves and
			foliage) may be done for proper aeration and sunshine.
<b>Passion fruit</b>	Fruiting	Collar rot	- Spray Redomil MZ-27 WP @ 2.5 g/lit water and drench soil with 1%
			Bordeaux mixture.
		Anthracnose	- Spray Carbendazim + Mancozeb @ 1mg/ lit water.
		Fruit fly	- Spray Carbaryl 0.1% or Malathion 0.05% or poison baiting with
			jaggery + fruit juice+ Malathion (20:20:1) @ 40-50 baits/ ha.
King Chilli	Fruiting	Fruit rot and aphid	- Spray Redomil Gold @ 2g/lit water + Imidacloprid @ 3ml/10lit of
			water.
Ginger &	Rhizome	Leaf spot & Soft rot in	- Spray Redomil MZ 72 WP @ 2g/lit water alternately with
Turmeric	initiation	ginger and Rhizome rot in turmeric	Carbendazim @ 2g/lit water at 14 days interval.
		in turneric	- Drain out excess water from the field.



# ICAR Research Complex for N.E.H. Region Manipur Centre, Lamphelpat, Imphal - 795 004



Name of the animal		Growth stage		Disease/ infestation	Agro-meteorological advisories	
Poultry		All susceptible age groups (as and when required)		Ranikhet disease	Vaccinate against Ranikhet disease.	
				Fowl pox	- Vaccinate against fowl pox. If already infected, paint with Iodine tincture or Betadine liquid daily on pox growth.	
				Management	Add Furazolidone @ 100g in 100 kg of feed for one week. Keep litter material dry and add lime powder (deactivated) @ 3-4 kg per 100sq. ft.	
				Parasites (external)	Spray Butox liquid @ 2 ml/ lit of water twice a week.	
Sheep/ Goat		Above 3 months of age (as and when required)		Endoparasite/ Ectoparasite	Deworm using Minthal bolus @ ½ bolus per 20 kg body weight accompanied with Livozyme @ 50ml daily.	
				H.S.	- Vaccinate against H.S. @ ½ ml sub- cutaneously.	
Pig		Above 3 months of age (as and when required)		Deworming	- Deworming against Helminth parasites using Piperazine citrate @ 30 ml per adult animal once.	
				Ticks	Add Butox liquid @ 2 ml/ lit of water and use the solution twice a wee while brushing the animal.	
					Give mineral mixture like Vimicon and Ascagold suspension in pregnan sow @ 20g and 20ml resp. in feed.	
Cattle / Buffalo/ Mithun		Above 3 months of age (as and when required)		Endoparasite/ Ectoparasite	- Inject Parid @ 1 ml/ 50 kg body weight.	
				Tick	Add Butox @ 2cc/ lit of water and bath animal using the solution a fortnight interval.	
				Deworming (Helminth parasites)	- Deworming against using Albendazole @ 5-10 g/kg b.wt.	
Fishery:					Give Minamil powder @ 20g twice daily in feed.	
Type of Farming	Stage		Management	Agro-metrological advisor	ies	
Carp	Breed	ling		- Clean and clear water having 7.0-7.8 pH free from unwanted vegetation and insects. Water		
culture				depth should be mainta		
				Mrigal, Catla, Kuri for	f carp brooders (2-4 years old) having more than 1kg b. wt. for Rohu, seed production. For Pengba & Khabak b. wt. May be less than 300g.	
			Hormone dose	- Ovitide/ Wova-FH/	Ovaprim@ 0.5ml/kg body weight can be injected to induce for spawning.	
	nurse	nurseries		- Ponds should be free from unwanted vegetation and insects and water depth should be maintained at 1.0-1.5m. p <sup>H</sup> of pond water should be maintained at 7.0-7.5. Feeds should be provided 2-3 times a day @ 5-10 body weight per day. 20-30 million spawn can be stock in 1 ha.		
	Grow - out		Pond and water	- Regular manuring at interval of 30 days with a slurry of RCD @1500kg/ha. Maintained p <sup>H</sup> of pond water at 7.0-7.5. Greenish colouration of water is desirable. If any change in colour, odour of water half of the water should be drain out and replace with fresh water.		
					ngs/ha can be stocked. Sampling of fish should be done by regular netting.	
					ortified with vitamins and minerals should be provided @ 3-5% body	
		1000			an be fed at 2-3 times a day.	
Paddy cum	Water management  Breeding		agement	- Maintained 1.0 m wa	ter depth of the trenches in paddy field. Provide rice bran and mustard oil	
fish culture				cake (1:1) as supplementary feed. Avoid insecticide/pesticide application.		
Cat fish (Ngakra)				- Inject Ovitide or Wova-FH or Ovaprim @ 0.7-0.8ml/kg body weight in 1 to 3 years old mature and healthy <i>Clarias magur</i> weighing 230 g-300 g for breeding.		
,	Water	Water management		- Water depth should be maintained at 0.5m -0.8m for nurseries. Ponds should be manured with RCD @ 5000 kg/ha at initial and 500-800 kg/ha at 15 days interval.		
	Feed & Fish		h	- Feed with high protein content 35-40% CP @ 5-8% body weight. 8000-10000 fingerlings can be stocked per ha.		