

Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN

31st March, 2017

Tamenglong

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April, 2017 as below:

Significant past weather for the preceding bi-weekly of

Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Tamenglong (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $23 - 27^{\circ}$ C & minimum temp. 18 - 21 °C. Relative humidity may reach up to 99 % (max RH) & 92 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 - Maintain 5-8cm of water level. - Make proper drainage system in and around the crop field to maintain optimum water level. - Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	e tomato/ chili is highly sus	sceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal		·	- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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Dotton Gardic Bulb formation to maturity Spray Dichlorovos 36 EC @ 0.5ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.		Vegetative		and 25kg Urea after 25-30days after tansplanting.
Animal Sciences Name of the animal Name of bird/ animal Stage Disease and Management All age groups Every 1 the young ones Pig All age groups except the young ones Pig All age groups Except the young ones All age groups Etoparasites All age groups Etoparasites All age groups except the young ones All age groups Etoparasites All age groups except the young ones All age groups Etoparasites Animals should be milked completely. Fodder crops should be irriga	Onion/ Garlic		Leaf minor/ Thrips	1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be
Name of the animal Name of bird/ animal Stage Disease and Management		maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid
All age groups Ranikhet disease At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time.	Animal Sciences			
All age groups Poultry (Chicken/ Turkey/ Duck) All age groups excepts the young ones All age groups except the you	Name of the animal			
Poultry (Chicken/ Turkey/ Duck) Poultry (Chicken/ Turkey/ Ducken/ To Poultry (Chicken/ Turkey/ Ducken/ To Poultry (Chicken/ Turkey/	Name of bird/ animal		Management	Agro-meteorological advisories
Deworming Dewo		All age groups		outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
Cattle All age groups excepts the young ones De-worming De-worming De-worming ones De-worming De-worming ones De-worming of animals should be given deworming agent.			Fowl Pox	Vaccinate against fowl pox.
All age groups excepts the young ones			Deworming	
Pig De-worming De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD. Mites infestation Poworming Singly Provide grazine liquid @ 10-15ml orally once only. All age groups excepts the young ones Mastitis Animals should be milked completely. Fodder cultivation Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation. Milk Fever Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food. Perennial fodder grass fields after rains.	Sheep/ Goat		Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night
All age groups except the young ones Care and management Mites infestation Deworming All age groups excepts the young ones All age groups excepts the young ones Mites infestation Deworming All age groups excepts the young ones Mastitis Fodder cultivation Milk Fever Perennial fodder grass Mites infestation Deworming Mites infestation Negrey Piperazine liquid @ 10-15ml orally once only. If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc. B.Q./ H.S/FMD Septicaemia, Foot & Mouth Disease, etc. B.Q./ H.S/FM		ones	Deworming	New born but not yet been dewormed should be given deworming agent.
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Mites infestation Spray with Skin Heal Spray in sufficient quantity.	Pig			Add antibiotics in feed and water.
Deworming			Mites infestation	
Cattle All age groups excepts the young ones All keyer perennial fodder grass All Age groups excepts the young ones B.Q./ H.S/FMD B.Q./ H.S/FMD Ectoparasites - Butox @ 2ml/lit of water at forth nightly interval. Animals should be milked completely. Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation. Milk Fever provide minamil/ mineral mixture @ 50-60 gm/ orally in the food. Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.			Deworming	
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Perennial fodder grass Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.			Fodder cultivation	
grass fields after rains.			Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
Maize/ Bajra/ Jawar Maize/ Bajra/ Jawar may be sown for use as green fodder.				
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Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



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MANIPUR BULLETIN

31st March, 2017

Bishnupur

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Weather forecast for next five days of Bishnupur (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $22 - 26^{\circ}$ C & minimum temp. 17 - 19 °C. Relative humidity may reach up to 99 % (max RH) & 92 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 Maintain 5-8cm of water level. Make proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	e tomato/ chili is highly	susceptibility to exces	s moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		 Sowing may be done after rains. Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
	ones	Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
	except the young ones	Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	All age groups	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	excepts the young	Mastitis	Animals should be milked completely.
	ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare
		grass	fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



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MANIPUR BULLETIN

31st March, 2017

Thoubal

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Weather forecast for next five days of Thoubal (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $21 - 26^{\circ}$ C & minimum temp. 18 - 20 °C. Relative humidity may reach up to 99 % (max RH) & 91 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 Maintain 5-8cm of water level. Make proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content of weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	te tomato/ chili is highly sus	ceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
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Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
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Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
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Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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Onion/ Garlic	Bulb formation to	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
	ones	Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups	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 except the your ones	except the young ones	Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
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Cattle	excepts the young	Mastitis	Animals should be milked completely.
	ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.
		grass	
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

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Ukhrul

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Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to maturity	Leaf minor/ Thrips	-Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may
Turkey/ Duck)			be given at 30days for all birds.
•			2. R ₂ B vaccine of 8-9 weeks of age group birds (layers).
			3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups except the young ones	De-worming	De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
Pig		Care and	Provide clean water (drinking).
		management	Add antibiotics in feed and water.
			Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	A 11	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	All age groups excepts the young ones	Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.
771 1	1	1.1aizo, Bajia sawai	Trailer Bajta variat may be some for use as green rouder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



Manipur Centre, Lamphelpat, Imphal - 795 004

"Gramin Krishi Mausam Seva"



MANIPUR BULLETIN

31st March, 2017

Imphal East

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April, 2017 as below:

Significant past weather for the preceding bi-weekly of

Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Imphal East (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $22 - 26^{\circ}$ C & minimum temp. 17 - 19 °C. Relative humidity may reach up to 99 % (max RH) & 86 % (min RH). The average wind speed may be 0 - 6 km/hr.

Field Crops Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 Maintain 5-8cm of water level. Make proper drainage system in and around the crop field to maintain optimum water level. Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	e tomato/ chili is highly sus	ceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may
Turkey/ Duck)			be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	 Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
Pig		Care and	Provide clean water (drinking).
		management	Add antibiotics in feed and water.
			Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	All aga amauma	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	All age groups	Mastitis	Animals should be milked completely.
	excepts the young ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN

31st March, 2017

Imphal West

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April, 2017 as below:

Significant past weather for the preceding bi-weekly of

Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Imphal West (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $21 - 26^{\circ}$ C & minimum temp. 16 - 18 °C. Relative humidity may reach up to 99 % (max RH) & 89 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 - Maintain 5-8cm of water level. - Make proper drainage system in and around the crop field to maintain optimum water level. - Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	te tomato/ chili is highly sus	sceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal		·	- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
Pig exc		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	All aga groups	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	All age groups excepts the young	Mastitis	Animals should be milked completely.
	ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare
		grass	fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN

31st March, 2017

Chandel

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April,

Significant past weather for the preceding bi-weekly of

Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Chandel (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $22 - 26^{\circ}$ C & minimum temp. 18 - 20 °C. Relative humidity may reach up to 98 % (max RH) & 85 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre- kharif rice)		 - Maintain 5-8cm of water level. - Make proper drainage system in and around the crop field to maintain optimum water level. - Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	te tomato/ chili is highly sus	ceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
	ones	Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups	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 except the your ones	except the young ones	Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	All age groups	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	excepts the young	Mastitis	Animals should be milked completely.
	ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.
		grass	
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN

31st March, 2017

Churachandpur

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April, 2017 as below:

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Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Churachandpur (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $21 - 25^{\circ}$ C & minimum temp. 17 - 19 °C. Relative humidity may reach up to 99 % (max RH) & 95 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 - Maintain 5-8cm of water level. - Make proper drainage system in and around the crop field to maintain optimum water level. - Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

- * No culture operation in vegetable crops particularly in low lying area.

* Solanaceae crops lik	te tomato/ chili is highly sus	ceptibility to exces	ss moisture.
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Khasi Mandarin	For grown up		For grown up Khasi Mandarin, apply 500g Urea, 1kg SSP & 400g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant along with 30 kg cowdung manure compost in the soil surrounding the plant after rains.
Ginger &			- Recommended varieties: For turmeric: Megha turmeric
Turmeric	Planting		For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
French Bean	Sowing to early vegetative		- Sowing may be done after rains Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
	maturity	Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
Animal Sciences			
Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
Pig except		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
		Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
	All age groups	Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
Cattle	excepts the young	Mastitis	Animals should be milked completely.
	ones	Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare
		grass	fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

Fisheries

- * New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- * Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- * Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
- * Avoid rain water to get drained directly into the culture pond.



Manipur Centre, Lamphelpat, Imphal - 795 004





MANIPUR BULLETIN

31st March, 2017

Senapati

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 1st to 5th April, 2017 as below:

Significant past weather for the preceding bi-weekly of

Imphal - West (28th to 30th March, 2017)
Observed haze from 28th to 29th morning then overcast from 29th afternoon and observed heavy rainfall of 83.8 mm was recorded during past three days. Maximum temperature range of 19.8 to 28.1 ° C and minimum temperature range of 14.4 to 16.6 ° C with mean relative humidity 87.3 % max and 73.3 % min was recorded in the past three days. The average wind speed range remained 3.4 to 5.7 km/hr.

Weather forecast for next five days of Senapati (1st to 5th April, 2017)

Likely to have widespread heavy to very heavy rainfall upto Tuesday over Manipur and mainly cloudy to overcast sky with maximum temp. $18-21^{\circ}$ C & minimum temp. 15-19 $^{\circ}$ C. Relative humidity may reach up to 98 %(max RH) & 80 % (min RH). The average wind speed may be 2-4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		 - Maintain 5-8cm of water level. - Make proper drainage system in and around the crop field to maintain optimum water level. - Drain out excess water accumulated due to heavy rains.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering		 Drain out excess water accumulated due to heavy rains during past two days at earliest possible from the crop field. Avoid water logging by constructing proper drainage system.
Seeds storage	Post harvest management		 For seed purpose dry, clean and store the seeds in <i>RC-seed bins</i> after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% in <i>godowns</i>.

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- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture

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			plant along with 30 kg cowdung manure compost in the soil surrounding the		
			plant after rains.		
Kachai Lemon	For grown up		For grown up Kachai Lemon apply 350g Urea, 400g SSP & 300g MOP per plant		
			along with 30 kg cowdung manure compost in the soil surrounding the plant after		
			rains.		
Ginger &			- Recommended varieties: For turmeric: Megha turmeric		
Turmeric	Planting		For ginger: Nadia		
			- Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1		
			ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or		
			wet method. If wet method is applied then treated seed should be allowed to dry		
			in shed before planting.		
			- Planting may be delayed till the field conditions permit.		
French Bean	Sowing to early		- Sowing may be done after rains.		
	vegetative		- Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like		
			Anupama and for pole type Local variety (Tangkhul hawai) at 60x60 cm with 2-3		
			seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at		
			the time of sowing.		
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop		
			field. Drain out excess water.		
	Sowing to early		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x		
Bhindi	vegetative		45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of		
			land preparation before sowing.		
			Recommended varieties are - Arka Anamika and Pusa Sawani		
Chilli/ capsicum	Early vegetative		In chilies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63%		
			WP) @ 2 g/ litre of water to control the fungal attack after rains.		
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose		



Manipur Centre, Lamphelpat, Imphal - 795 004





	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
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Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
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			be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers).
			3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and	Provide clean water (drinking).
		management	Add antibiotics in feed and water.
			Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Mites infestation	Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
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		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
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		Perennial fodder grass	Suckers/ cuttings of hybrid wapier Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.
T. 1 .	1	Traizer Bujiu sawai	Trailed Dajra variat may be sown for use as green founds.

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