



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Bishnupur (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy with maximum temp. of 27.0 - 30.0 °C and minimum temp. of 20.0 – 22.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 87 %. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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Turmeric	Vegetative	Leaf Spot and leaf blotch	- Make arrangements to avoid water logging. - After rains, spray DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch.
Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/ Lemon/Papaya/ Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.
Animal Sciences			
Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt.once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.
Fisheries			
Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

I. Meghachandra Singh
Scientist i/c, IAAS



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MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Chandel (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 25.0 - 29.0 °C and minimum temp. of 19.0 – 21.0 °C. The maximum RH is likely to attain max of 99 % and minimum RH of 89 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

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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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 28.0 - 31.0 °C and minimum temp. of 20.0 – 23.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 86 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

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Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
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Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

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Scientist i/c, IAAS



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“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

Imphal-East

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Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
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			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
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Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
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Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

I. Meghachandra Singh
Scientist i/c, IAAS



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal - West (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy with maximum temp. of 27.0 - 30.0 °C and minimum temp. of 21.0 – 23.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 82 %. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative	Leaf Spot and leaf blotch	- Make arrangements to avoid water logging. - After rains, spray DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch.
Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/ Lemon/Papaya/ Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

I. Meghachandra Singh
Scientist i/c, IAAS



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Senapati (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy with maximum temp. of 26.0 - 29.0 °C and minimum temp. of 18.0 – 20.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 84 %. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative	Leaf Spot and leaf blotch	- Make arrangements to avoid water logging. - After rains, spray DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch.
Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

I. Meghachandra Singh
Scientist i/c, IAAS



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Tamenglong (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 27.0 - 30.0 °C and minimum temp. of 20.0 – 23.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 83 %. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative	Leaf Spot and leaf blotch	- Make arrangements to avoid water logging. - After rains, spray DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch.
Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

I. Meghachandra Singh
Scientist i/c, IAAS



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Thoubal (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 26.0 - 29.0 °C and minimum temp. of 19.0 – 21.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 89 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Colocasia	Corm formation		- Weeding and earthing up of the soil at the base of the plant is necessary to enhance corm development. Drain out excess water. - Spray D-M 45 @ 2g/lit of water to protect from leaf spot.
Banana	Planting		- Plant banana at a spacing of 2.7m x 3m for tall varieties and 1.8m x 2.4m or 1.8m x 2.4m for dwarf varieties. Pit size: 2x2x2 feet. Fill up the pit with soil & FYM in the ratio 3:2. Plant one sucker (with broad base & narrow leaves) per pit. In newly established orchard, intercropping with cabbage/ cauliflower/ radish/ carrot or spinach may be followed .



**ICAR Research Complex for N.E.H. Region
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“Integrated Agromet Advisory Services”

Turmeric	Vegetative	Leaf Spot and leaf blotch	- Make arrangements to avoid water logging. - After rains, spray DM-45 @ 2.0 g/ lit of water as prophylactic measure against Leaf spot and Leaf blotch.
Cucurbits	Fruiting to harvesting	Powdery mildew	- If there is infestation of Powdery mildew in large scale, then first harvest mature fruits, then spray Bayleton @ 7 gm/ lit of water after the rains. - Make provisions to avoid water logging. - Support/ stack properly to avoid any loss due to contact of fruits with soil and to avoid overcrowding of leaves/ branches.
Orange/Lime/ Lemon/Papaya/ Litchi/ Tree bean	Planting	Lichen incidence	- If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate.

Animal Sciences

Name of the animal	Growth stage	Disease/ infestation	Agro-meteorological advisories
Goat	Above 3 months of age	Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Pig	Above 3 months of age	Ecto-parasite	- Apply Butox @ 3ml/lit of water while brushing the animals. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
		Helminth parasite	- Give Minthal bolus 200mg, 1 bolus per 40 kg b. wt. once. Accompany with a vitamin like Livozyme @ 50ml twice daily.
Cattle / Buffalo/ Mithun	Above 3 months of age	Hump sore	- Wash the sore with Hydrogen peroxide or Potassium permanganate and apply Himax ointment twice daily. - In severe case, inject Dicrysticin LA once daily intramuscularly for 5 days.
		Ecto-parasite	- Apply Butox @ 3 ml/lit of water while brushing the animals.
		Helminth parasite	- Give Nilzan-90ml suspension @90ml for 300 kg b. wt.
		Fascioliosis	- Give Tolzan-F 15ml orally/ 300kg b. wt. It must be associated with vitamins like Livozyme @ 50ml twice daily.
Poultry	All susceptible age groups	<i>Coccidiosis</i>	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		<i>Pox</i>	- Vaccinate against pox.
			- Deworm with Piperazine Hexahydrate- @ 30 ml/100birds in 3-5 lit of water: upto 6weeks old and @ 60ml/100 birds in 5-10 lit of water: above 6weeks of age. - Administer 50ml calcicare for 100 birds in drinking water.
		Management	- Mix lime powder @ 2 kg per 100 sq. ft. area in litter material.

Fisheries

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries	Pond water	Pond water must be made free from unwanted plants and insects. Apply agri-lime @250kg/ha at valley and 300kg at hilly areas.
		Feed	@5-10% body weight/day in 2-3 splits.
		Fish numbers	20-30 million spawn per hectare.
	Grow-out	Pond water	Manuring at 30 days interval with a slurry of RCD @1500kg/ha. If the colour or odour of pond water changes, then drain out half of pond water and replace with the fresh water.
		Feed	Well balanced feed fortified with vitamins and minerals should be provided @ 3-5% body weight per day in 2-3 splits.
		Fish numbers	8000-10,000 fingerlings/ha can be stocked Sampling of fish for growth, diseases (if any) should be done by regular netting.
Paddy cum fish culture	Water		Water depth of the trenches in paddy fields: 1.0 m. Rice bran and mustard oil cake (1:1) can be provided as supplementary feed. Do not apply insecticide or pesticide in paddy cum fish culture practice.

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Scientist i/c, IAAS



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MANIPUR BULLETIN

9th July, 2013

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 10th to 14th July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (5th to 8th July, 2013)</u></p> <p>During the past four days the sky was mainly cloudy to cloudy. 5.2 mm rainfall was recorded during past four days. Maximum temperature range observed was 27.2 – 29.2 °C, range of minimum temperature observed was 21.1 – 23.0 °C, mean relative humidity observed in morning and afternoon were 90.25 and 76.0 % respectively. The average wind speed range was 2.2 – 8.2 km/hr.</p>	<p><u>Weather forecast for next five days of Ukhrul (10th to 14th July, 2013)</u></p> <p>It is likely to have light rains but moderate rains on 12th July. The sky is likely to be mainly cloudy with maximum temp. of 24.0 - 27.0 °C and minimum temp. of 15.0 – 18.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 88 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
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Monsoon Watch: Southwest monsoon was active over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, coastal Andhra Pradesh, Telangana, coastal & north interior Karnataka, Assam & Meghalaya and Andaman & Nicobar Islands.

Weather Forecast for next 3 days (upto 0830 hours IST of 12th July, 2013): Rain/thundershowers would occur at many of the places over Manipur.

Weather Outlook for subsequent 4 days from 12th to 16th July, 2013: Rainfall would occur at many places over northeastern states

Name of the crop	Stage	Pest and disease infestation	Agro-meteorological advisories
Field Crops			
Rice	(Pre-kharif) Maturity to harvesting		- Harvest rice crop when (75-80) % of the spikelet is yellow.
	(Kharif) Nursery and land preparation to transplanting		- Sowing may be done. Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Before first ploughing apply 10-15 t of FYM/ compost per ha. Two/ three ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Also, cut out the corners and edges of the fields. Maintain water depth of 5-7 cm depth. - Apply 50% of total N, full dose of P and 1/3 rd of K at the time of final puddling.
			- Uproot 25 days old seedlings. Transplant 2-3 seedlings at a spacing of 25cm x 10cm. Maintain a thin film of water after transplanting.
Maize	Harvesting (Summer maize)		- Harvest the mature cobs for seeds. Make bundles, dry and store.
Soybean / Groundnut	Vegetative		- Two hand weeding are required, one at nearly 25 days and second at 35 days to avoid leaf eating insects/hairy caterpillars.
Blackgram/ Rice bean	Sowing to vegetative		- Sowing may be continued in new areas. - Inter-culture operations may be carried out.
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