



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



“Integrated Agromet Advisory Services”

MANIPUR BULLETIN

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Bishnupur (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 24.0 - 28.0 °C and minimum temp. of 20.0 – 21.0 °C. The maximum RH is likely to remain above 89 % and minimum RH is likely to be nearly 76 % on 29th June. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
---	---

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Chandel (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 27.0 - 28.0 °C and minimum temp. of 20.0 – 21.0 °C. The maximum RH is likely to remain above 90 % and minimum RH is likely to be nearly 81 % on 29th June. The average wind speed during next five days may reach upto max. value of 5 km/hr.</p>
---	---

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 2013

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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Churachandpur (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 25.0 - 29.0 °C and minimum temp. of 21.0 – 22.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 96 %. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
---	---

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 2013

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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Imphal - East (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be cloudy with maximum temp. of 27.0 - 28.0 °C and minimum temp. of 19.0 – 21.0 °C. The maximum RH is likely to remain above 90 % and minimum RH is likely to be nearly 70 % on 29th June. The average wind speed during next five days may reach upto max. value of 2 km/hr.</p>
---	--

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

Significant past weather for the preceding bi-weekly of
Imphal - West (25th to 27th June, 2013)

During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. **34.9 mm** rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.

Weather forecast for next five days of Imphal - West (29th
June to 3rd July, 2013)

It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 24.0 - 28.0 °C and minimum temp. of 20.0 – 22.0 °C. The maximum RH is likely to attain max of 99 % and minimum RH of 94 %. The average wind speed during next five days may reach upto max. value of 3 km/hr.

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Senapati (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 22.0 - 28.0 °C and minimum temp. of 19.0 – 20.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 95 %. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
---	--

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Tamenglong (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 24.0 - 28.0 °C and minimum temp. of 19.0 – 21.0 °C. The maximum RH is likely to attain max of 100 % and minimum RH of 92 %. The average wind speed during next five days may reach upto max. value of 3 km/hr.</p>
---	--

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Thoubal (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be cloudy with maximum temp. of 22.0 - 27.0 °C and minimum temp. of 20.0 – 21.0 °C. The maximum RH is likely to remain above 93 % and minimum RH is likely to be nearly 79 % on 29th June. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
---	--

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

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

28th June, 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 29th June to 3rd July, 2013 as given below:

<p><u>Significant past weather for the preceding bi-weekly of Imphal - West (25th to 27th June, 2013)</u></p> <p>During the past three days the sky was cloudy but partly cloudy during afternoon hours of 26th June. 34.9 mm rainfall was recorded during past three days. Maximum temperature range observed was 28.3 – 30.2 °C, range of minimum temperature observed was 22.4 – 24.1 °C, mean relative humidity observed in morning and afternoon were 95.0 and 77.67 % respectively. The average wind speed range was 1.2 – 1.5 km/hr.</p>	<p><u>Weather forecast for next five days of Ukhrul (29th June to 3rd July, 2013)</u></p> <p>It is likely to have heavy to very heavy rains during next 48 hrs but light to moderate during remaining days with thundershowers during next five days. The sky is likely to be mainly cloudy to cloudy with maximum temp. of 20.0 - 25.0 °C and minimum temp. of 15.0 – 18.0 °C. The maximum RH is likely to attain max of 99 % and minimum RH of 94 %. The average wind speed during next five days may reach upto max. value of 4 km/hr.</p>
---	---

Monsoon Watch: Yesterday, Southwest monsoon was vigorous over Madhya Pradesh and active over Jammu & Kashmir, Himachal Pradesh, east Uttar Pradesh, south interior Karnataka and Arunachal Pradesh

Main Weather Observation: Kalpana 1Cloud Imagery at 1730 hrs IST shows low /medium clouds over Manipur.

Weather Forecast for next 3 days (upto 0830 hours IST of 1st July, 2013): Rain/thundershowers would occur at most places over northeast.

Weather Warnings: Heavy to very heavy rainfall would occur at one or two places over Manipur during next 48 hrs.

Weather Outlook for subsequent 4 days from 1st to 5th July, 2013: Rain/thundershowers 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) Grain maturity		- There is forecast for heavy to very heavy rainfall during next 48hrs. Hence, mature crops may be harvested. If the crops are not mature enough for harvesting then make provisions for proper drainage system in and around the crop field.
	(Kharif) Nursery and land preparation of main field		- Treat the seed with Carbendazim @ 2g/kg of seed before sowing. - Sowing may be done after some days as there is forecast for heavy to very heavy rainfall in next few days. Make possible arrangements to avoid submergence of seedlings for long time. - After the wet spell, 2-3 ploughing with cross ploughing followed by puddling and levelling for transplanting may be done. Maintain water depth of 5-7 cm depth.
Maize	Cob maturity to harvesting (Summer maize)		- Maintain proper drainage system to avoid water logging in and around the crop field due to heavy to very heavy rains during next few days. - Harvest the mature cobs for seeds. Make bundles and dry.
Soybean / Groundnut	Vegetative		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Blackgram/ Rice bean	Sowing		- Make provisions for proper drainage system in and around the crop field where the crop is already sown to avoid water logging.
Storage			- Clean and store the seeds in RC-seed bins after proper drying. Check for germination of seeds or fungal growth.
Horticulture Crops			
Chilli	Fruiting to harvesting		- Provide proper drainage as there is forecast of heavy to very heavy rains during next 48 hrs water stagnation is harmful for chilli. Harvest fruits at earliest and for seeds choose red tinted mature fruits free from disease and dry it properly before storage.
Cucurbits	Fruiting		- Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops. - Support/ stack properly to avoid any loss due to contact with soil and to avoid overcrowding of leaves/ branches.



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



“Integrated Agromet Advisory Services”

Turmeric	Vegetative		Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.
Orange/Lime/Lemon/Papaya/Litchi/ Tree bean	Planting	Lichen incidence	<ul style="list-style-type: none"> - If lichen is observed, then scrap out the affected area and paint with Bordeaux paste or Benlate after the wet spell. - Make provisions for proper drainage system in and around the crop field to avoid water logging or submergence of crops.

Animal Sciences

* Use water sanitizer to keep clean drinking water for animals especially during rainy days.

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	- Swine Fever	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - Vaccinate with Swine Fever vaccine as per prescribed dose but de-worm using Panacur tab @ 1.5mg/10kg body weight before vaccination. - For skin infection due to bite of mosquitoes or wild flies, inject Ivermectin @ 1ml/ 30 kg body weight once.
Cattle / Buffalo/ Mithun	All age groups except three months or below	Hump sore	<ul style="list-style-type: none"> - Apply Butox @ 3ml/lit of water while brushing the animals. - 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. - Muddy water should not be given to animals as soil borne diseases like Black Quarter/ Black Leg outbreak may occur. - Osteovet susp. @50ml must be added in feed/ water twice daily along with Minamil powder @10-25g once daily for Milch cow.
Poultry	All susceptible age groups	Coccidiosis	- Poultry must be provided <i>Coximar</i> (@ 1g/lit of drinking water) for 7 days.
		Pox	- Vaccinate against pox.
			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Mix lime powder @ 2 kg per 100 sq. ft. area in litter material. - Cover side walls of poultry sheds with polythene sheet to protect from rain.

Fisheries

* **Encircle pond with happa to avoid fish escape from pond if over flow of water occurs due to heavy rains**

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.
Cat fish (Ngakra)	Pond water		Water depth for nurseries: 0.5-0.8m. Add RCD @ 5000kg/ha at initial then 500-800kg/ha at 15 days interval as manure.
	Feed		Feed with high protein content 35-40% CP feed @ 5-8% body weight.
	Fish numbers		8000-10000 fingerlings can be stocked in 1 ha

I. Meghachandra Singh
Scientist i/c, IAAS