



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****30th May, 2017****Tamenglong**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Tamenglong (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 23 - 31 °C & minimum temp. 20 - 22 °C. Relative humidity may reach up to 100 % (max RH) & 94 % (min RH). The average wind speed may be 2 - 3 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

Horticulture Crops

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



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			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)
Scientist i/c, GKMS



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**MANIPUR BULLETIN****30th May, 2017****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 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Thoubal (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 25 - 31 °C & minimum temp. 22 - 23 °C. Relative humidity may reach up to 99 % (max RH) & 95 % (min RH). The average wind speed may be 2 - 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



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			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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**MANIPUR BULLETIN****30th May, 2017****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 31st May to 4th June, 2017 as below:

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Weather forecast for next five days of Ukhrul (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 22 - 30 °C & minimum temp. 20 - 21 °C. Relative humidity may reach up to 98 % (max RH) & 86 % (min RH). The average wind speed may be 3-5 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
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Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



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Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
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Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
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**MANIPUR BULLETIN****30th May, 2017****Imphal East**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

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Weather forecast for next five days of Imphal East (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 24 - 30 °C & minimum temp. 20 - 22 °C. Relative humidity may reach up to 100 % (max RH) & 93 % (min RH). The average wind speed may be 2 - 3 km/hr.

Field Crops			
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Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)
Scientist i/c, GKMS



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****30th May, 2017****Imphal West**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Imphal West (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 24 - 30 °C & minimum temp. 20 - 22 °C. Relative humidity may reach up to 100 % (max RH) & 93 % (min RH). The average wind speed may be 2 - 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

Horticulture Crops

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)
Scientist i/c, GKMS



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****30th May, 2017****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 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Bishnupur (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 24 - 31 °C & minimum temp. 21 - 22 °C. Relative humidity may reach up to 99 % (max RH) & 94 % (min RH). The average wind speed may be 2 - 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)
Scientist i/c, GKMS



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****30th May, 2017****Chandel**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Chandel (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 22 - 29 °C & minimum temp. 20 - 23 °C. Relative humidity may reach up to 99 % (max RH) & 88 % (min RH). The average wind speed may be 4 - 5 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
Horticulture Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

(I. Meghachandra Singh)
Scientist i/c, GKMS



ICAR Research Complex for N.E.H. Region
Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****30th May, 2017****Churachandpur**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Churachandpur (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 26 - 31 °C & minimum temp. 21 - 22 °C. Relative humidity may reach up to 99 % (max RH) & 95 % (min RH). The average wind speed may be 3 - 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.

Horticulture Crops

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Cauliflower	Nursery		- Preparation of nursery for early cauliflower in the upland area or in rain protective structures are available with the farmers.
Tree bean	Planting		Planting of 2 to 2.5 yrs old tree bean should be done in the pit of size 60 cm x 60 cm x 60 cm. The top soil should be mixed thoroughly with 5kg FYM. As a prophylactic measure against termite/ ants or other soil borne disease, Furadan 3-



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			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
French Bean/ Bhindi	Vegetative to flowering		
Turmeric	Vegetative		- Weeding and interculture operation may be done after rains and apply 100kg Urea and 300kg kg SSP at 2-3 months.
Cucurbits	Flowering to fruiting		- Fruits of cucurbits like bottle gourd, water melon, pumpkin should not have direct contact with soil. Provide bedding material (dried twigs, leaves, polythene sheet). - If the crop is grown in slightly shady and damped area then spray Bayleton @ 7 gm/ litre of water once as prophylactic measure against powdery mildew.
Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
Chilli/ capsicum	Vegetative to flowering		- In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains. - Weeding may be done to avoid insect pest infestation.

Animal Sciences

*** Provide clean drinking water for birds and animals.**

Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
Poultry (Chicken/ Turkey/ Duck)	All age groups	Fowl Pox	Vaccinate against fowl pox.
		Coccidiosis	- Give Amprolium Powder @2g/lit of drinking water for 5 to 7 days.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
			- Bleaching powder may be spread near farm premises. - To avoid dehydration give vit C in drinking water along with other vitamins/ ORS during evening. - Avoid caking of litter materials.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Sheep should be sheared during this month.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Swine Fever	- SFV (Swine Fever vaccine) @1ml sub- cutaneously inside thigh must be administered after the age of 3 months.
		FMD	- Vaccinate against FMD after the age of 3 months.
		Mineral feeding	➤ Provide mineral mixture.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
Cattle	All age groups excepts the young ones	Management & heat related disease	➤ Provide enough water. ➤ Take up measures to protect against fever, dehydration, loss of appetite, body salt decrease. ➤ Add appropriate quantity of salt mixture in water and feed. ➤ Deworming may be done using appropriate agent against Oesophagostom.

Fishery:

Type of Farming	Stage	Management	Agro-metrological advisories
Carp culture	Nurseries/ grow-out	Pond and water	Maintain minimum depth of 1.5 m. Apply Lime/ Green AQ for maintaining good quality water.
		Feed	Provide 2-3 times @ 5-10% body weight per day. Provide good feed having 30% crude protein fortified with vitamins and mineral.
	Brooder	Pond water and feed	Maintain minimum depth of 2.0-2.2 m. Provide feed @ 3-5 % body weight per day.
	Breeding	Hormone	Fish hormones like ovaprim, ovatide or Wova-FH can be injected in both the brooders @ 0.5 ml/kg of fish for catla, rohu and mirgal; 0.5-0.7 ml/kg for grass carp.
	Hatcheries	water	Hatching can be done in traditional hapas having outer & inner hapas or circular hatcheries. A mild current with fine shower is needed for circular hatcheries. Feed should not be given for 3 days.

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**MANIPUR BULLETIN****30th May, 2017****Senapati**

IAAS, ICAR-RC Manipur Centre in association with India Meteorological Department, Regional Meteorological Centre, Guwahati and Northern Hemisphere Analysis Centre, New Delhi, Ministry of Earth Science, Govt. of India reports the weather forecasts for the next five days, i.e., from 31st May to 4th June, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (26th to 29th May, 2017)

Observed mainly cloudy to overcast and **36.5 mm** rainfall was recorded during past four days. Maximum temperature range of 26.6 to 31.5 °C and minimum temperature range of 20.4 to 22.1 °C with mean relative humidity 85.75 % max and 65.25 % min was recorded in the past four days.

Weather forecast for next five days of Senapati (31st May to 4th June, 2017)

Likely to have widespread rainfall over Manipur with mainly cloudy to overcast sky upto and maximum temp. 23 - 30 °C & minimum temp. 20 - 22 °C. Relative humidity may reach up to 99 % (max RH) & 89 % (min RH). The average wind speed may be 2-3 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Panicle initiation to flowering (Pre-kharif rice)	Leaf folder and case worm	- Maintain water level at 5-8 cm. Drain out excess water if accumulated in the crop field due to rains. Apply Lambdacyhothrin 5% @ 15 ml/ 15 litres of water, if case worm infested drain out the field immediately when possible.
	Nursery (Main kharif rice)		- Prepare community nursery in upland area/ terrace of 700m ² of land is for a hectare. Seed rate is 40 – 60 Kg /ha for transplanting of rice. - Soak seeds and incubate before sowing. - Maintain 2-3cm water level initially and drain out drain out completely before sowing. Increase water level to just submerge soil surface and expose the green aerial sprout after sowing. - Land preparation of main field may be started for transplanting rice seedling. Apply 65kg Urea, 250 kg SSP and 45 kg MOP per hectare at the time of final leveling.
Soybean	Sowing to vegetative		Sowing may be done at spacing of 45 cm x 30 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. Seed rate of soybean is 40-45 kg/ha or 10-11 kg of seed /sanganam. - Treat seeds with Nativo@2g/kg seeds or with Bavistin@2.5g/kg seed or with Thiram. - Avoid weeds in crop field.
Groundnut	Sowing to vegetative		Seed rate of 100-110 kg of Kernal/ha of the recommended varieties are ICGS-75 may be sown at spacing of 30 cm x 15 cm. It is recommended to apply 44 kg of urea, 375kg of SSP or 130 kg of DAP and 67 kg of MOP per ha as a basal application during final ploughing or incorporated at the time of sowing. - Treat seeds with Imidacloprid @ 2ml/ litre water or Bavistin @ 2.5g/ kg seed or with Thiram. - Avoid weeds in crop field.
Kharif Maize	Sowing to vegetative		Apply 60kg of urea, 65kg of DAP and 30kg of MOP per hectare as a basal application during final ploughing or at the time of sowing. For high altitude spacing may be 50cm x 25cm while for low altitude it may be 60cm x 30cm. - Avoid weeds in crop field.
Blackgram & Rice bean	Sowing to vegetative		Seed rate of 10-15 kg/ ha may be sown by broadcasting or dibbling after rains. Treat the seed with Thiram or Captan before sowing @ 2g/kg seeds. - Avoid weeds in crop field.
Seeds storage	Post harvest management		- For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. - For grains, store grains in well ventilated godowns after drying proper. Spray Malathion 1% on the walls of stores.
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			G @2gm/pit and Captan 50 WP or Sixer (Carbendazim + Mancozeb) @ 1 gm per pit may be incorporated in the soil before planting. - Weeding may be done to avoid insect pest infestation.
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Tomato/ Brinjal	Vegetative to flowering		- Apply 25kg Urea after 25-30days of transplanting. - Weeding may be done to avoid insect pest infestation.
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