



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

**MANIPUR BULLETIN****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Tamenglong (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 33 °C & minimum temp. 18 - 19 °C. Relative humidity may reach up to 80 % (max RH) & 30 % (min RH). The average wind speed may be 3-6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

(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****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Thoubal (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 31 °C & minimum temp. 19 - 20 °C. Relative humidity may reach up to 71 % (max RH) & 23 % (min RH). The average wind speed may be 6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkul hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

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**MANIPUR BULLETIN****11th April, 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 12th to 16th April, 2017 as below:

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Weather forecast for next five days of Ukhrul (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 26 – 29 °C & minimum temp. 15 - 17 °C. Relative humidity may reach up to 64 % (max RH) & 20 % (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	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

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Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

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

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		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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Manipur Centre, Lamphelpat, Imphal - 795 004
“Gramin Krishi Mausam Seva”

**MANIPUR BULLETIN****11th April, 2017****Imphal East**

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Weather forecast for next five days of Imphal East (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 31 °C & minimum temp. 16 - 17 °C. Relative humidity may reach up to 74 % (max RH) & 23 % (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	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

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Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
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Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

(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****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Imphal West (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 29 – 31 °C & minimum temp. 19 - 20 °C. Relative humidity may reach up to 78 % (max RH) & 27 % (min RH). The average wind speed may be 3-6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkul hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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



	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

(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****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Bishnupur (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 31 °C & minimum temp. 19 - 20 °C. Relative humidity may reach up to 74 % (max RH) & 25 % (min RH). The average wind speed may be 4-6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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



	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

(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****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Chandel (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 32 °C & minimum temp. 17 - 18 °C. Relative humidity may reach up to 63 % (max RH) & 20 % (min RH). The average wind speed may be 5-6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhul hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”



	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

(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****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Churachandpur (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 30 – 32 °C & minimum temp. 19 - 20 °C. Relative humidity may reach up to 75 % (max RH) & 28 % (min RH). The average wind speed may be 4-6 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

The water logged crop field may take more than a month to drain out excess water and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area is converted into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
French Bean	Sowing to early vegetative		- Sowing may be done when the field conditions permit. - Spacing: 30x45 cm from seed to seed & row to row for dwarf variety like Anupama and for pole type Local variety (Tangkhal hawaii) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
Cucurbits	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
Bhindi	Sowing to early vegetative		Sowing of bhindi/ladies finger may be done after rains at the spacing of 30cm x 45cm. Apply 20kg urea, 38kg SSP and 20kg MOP per sangam at final stage of land preparation before sowing. Recommended varieties are - Arka Anamika and Pusa Sawani
Chilli/ capsicum	Early vegetative		In chillies and capsicum, spray Sixer (Carbendazim 12% WP + Mancozeb 63% WP) @ 2 g/ litre of water to control the fungal attack after rains.
Tomato/ Brinjal			- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose



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	Vegetative		and 25kg Urea after 25-30days after tansplanting.
Onion/ Garlic	Bulb formation	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.
	Maturity		- Let the plants grow as such in the field. - Do not harvest/ uproot at present. - Let the mature plants dry in the sun for at least 7-10 days or more depending upon the stage.

Animal Sciences

Name of the animal

*** 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	Ranikhet disease	At the end of winter season and starting of spring season by March, there may be outbreaks of Ranikhet Disease, hence vaccinate all birds against Ranikhet Diseases in this time. 1. F-1 Strain may be first administered within 7 days of age and second dose may be given at 30days for all birds. 2. R ₂ B vaccine of 8-9 weeks of age group birds (layers). 3. Killed ND virus vaccine of 16-18 weeks of age group birds (layers).
		Fowl Pox	Vaccinate against fowl pox.
		Deworming	➤ Use Albendazole liquid @ 20-40 ml for 100 adult birds and repeat it next day with half the dose at regular interval of 3 weeks.
Sheep/ Goat	All age groups excepts the young ones	Vaccination	- Vaccinate against Enterotoxemia and sheep pox.
		Management	- Pregnant animal (more than 6 months) should be given additional feed.
		Mineral feeding to protect (PICA)	- Mineral mixtures are to be supplemented.
		Deworming	New born but not yet been dewormed should be given deworming agent.
Pig	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		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	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Fodder cultivation	➤ Maize/ Jowar/ Bajra sown as fodder crop may be harvested after 45-50 days.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Management	- Some female animals may get agitated due to the heat especially during night time, protect and take care of it.

Fisheries

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

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Scientist i/c, GKMS



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**MANIPUR BULLETIN****11th April, 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 12th to 16th April, 2017 as below:

Significant past weather for the preceding bi-weekly of Imphal - West (7th to 10th April, 2017)

Observed mainly cloudy during morning hours except on 9th morning with mainly clear sky and mainly clear sky during afternoon hours except during afternoon hours of 7th April and rainfall of 3.7 mm was recorded during past four days. Maximum temperature range of 25.8 to 29.0 °C and minimum temperature range of 17.5 to 22.1 °C with mean relative humidity 83.75 % max and 61.5 % min was recorded in the past four days. The average wind speed range remained 4.0 to 8.1 km/hr.

Weather forecast for next five days of Senapati (12th to 16th April, 2017)

Likely to have no rain and mainly clear to partly cloudy sky with maximum temp. 26 – 29 °C & minimum temp. 15 - 17 °C. Relative humidity may reach up to 73 % (max RH) & 22 % (min RH). The average wind speed may be 4 km/hr.

Field Crops			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
Rice	Tillering (Pre-kharif rice)		- Maintain 5-8cm of water level. - Drain out excess water accumulated due to rains. - Monitor for insect pest in the crop. - Hand weeding may be done.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
Rabi maize	Flowering to cob formation		- Drain out excess water accumulated due to heavy rains at earliest possible from the crop field. - Avoid water logging by constructing proper drainage system.
Kharif Maize	Land preparation		- Land preparation for sowing kharif maize may be done.
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% in godowns .

Horticulture Crops

- * Drain out excess water in crop field to avoid water logging.
- * No culture operation in vegetable crops particularly in low lying area.
- * Solanaceae crops like tomato/ chili is highly susceptibility to excess moisture.

For horticultural crops whose field were already damaged by previous incessant rain, nursery raising for following crops may be done in rain sheltered areas/ poly-houses:

- a. Cauliflower and cabbage
- b. Short duration cucurbits (bottle gourd, cucumber, pumpkin and gherkin, etc.)
- c. Onion variety (Nasik red) may be sown for green.
- d. Cow pea variety Rainy Royal may be sown in the upland area.

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