



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

**MANIPUR BULLETIN**7<sup>th</sup> 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)**

Observed mainly cloudy to overcast and rainfall of **24.9 mm** was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.

**Weather forecast for next five days of Bishnupur (8<sup>th</sup> to 12<sup>th</sup> April, 2017)**

Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 29-30 °C & minimum temp. 18-20 °C. Relative humidity may reach up to 91 %- (max RH) & 49 % (min RH). The average wind speed may be 4-6 km/hr.

<b>Field Crops</b>			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	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.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

**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 cauliflower
- 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 and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area 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
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



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			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
<b>Tomato/ Brinjal</b>	Vegetative		- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.
<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	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 <sub>2</sub> 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.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapiar Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

**Fisheries**

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

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



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

**MANIPUR BULLETIN**7<sup>th</sup> 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)</b>          Observed mainly cloudy to overcast and rainfall of <b>24.9 mm</b> was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.</p>	<p><b>Weather forecast for next five days of Chandel (8<sup>th</sup> to 12<sup>th</sup> April, 2017)</b>          Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 29-30 °C &amp; minimum temp. 19-20 °C. Relative humidity may reach up to 85 %- (max RH) &amp; 39 % (min RH). The average wind speed may be 4-6 km/hr.</p>
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	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

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		Fowl Pox	Vaccinate against fowl pox.
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**MANIPUR BULLETIN**7<sup>th</sup> April, 2017**Churachandpur**

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**Weather forecast for next five days of Churachandpur (8<sup>th</sup> to 12<sup>th</sup> April, 2017)**

Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 29-30 °C & minimum temp. 18-19 °C. Relative humidity may reach up to 92 %- (max RH) & 51 % (min RH). The average wind speed may be 4-5 km/hr.

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**MANIPUR BULLETIN**7<sup>th</sup> April, 2017**Senapati**

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	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

**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 cauliflower
- 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 and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area 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
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
<b>Tomato/ Brinjal</b>	Vegetative		- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.
<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	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 <sub>2</sub> 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.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapiar Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

**Fisheries**

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

**(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**7<sup>th</sup> 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)</b>  Observed mainly cloudy to overcast and rainfall of <b>24.9 mm</b> was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.</p>	<p><b>Weather forecast for next five days of Tamenglong (8<sup>th</sup> to 12<sup>th</sup> April, 2017)</b>  Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 29-30 °C &amp; minimum temp. 19-20 °C. Relative humidity may reach up to 96 %- (max RH) &amp; 56 % (min RH). The average wind speed may be 2-4 km/hr.</p>
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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	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.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

**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 cauliflower
- 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 and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area into water harvesting pond which may serve to maintain continuous water supply for irrigation in future.

<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
<b>Tomato/ Brinjal</b>	Vegetative		- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.
<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	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 <sub>2</sub> 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.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapiar Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

**Fisheries**

- \* Encircle ponds to avoid escape of fishes.
- \* New fish ponds may be made or old ones may be renovated/ cleaned before for large scale fish culture.
- \* Care must be taken for newly rain fed ponds by liming for stocking fish fries/ fingerlings or yearlings.
- \* Intensive care must be taken for fish brooders by keeping them in separate ponds. It must be provided with well balanced feed and good quality water.
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**ICAR Research Complex for N.E.H. Region**  
**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**7<sup>th</sup> 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)</b>          Observed mainly cloudy to overcast and rainfall of <b>24.9 mm</b> was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.</p>	<p><b>Weather forecast for next five days of Thoubal (8<sup>th</sup> to 12<sup>th</sup> April, 2017)</b>          Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 29-30 °C &amp; minimum temp. 19-20 °C. Relative humidity may reach up to 93 %- (max RH) &amp; 46 % (min RH). The average wind speed may be 2-4 km/hr.</p>
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<b>Field Crops</b>			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	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.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

**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 cauliflower
- 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 and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area 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
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



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



			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
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<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
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**Manipur Centre, Lamphelpat, Imphal - 795 004**  
**“Gramin Krishi Mausam Seva”**

**MANIPUR BULLETIN**7<sup>th</sup> 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)</b>  Observed mainly cloudy to overcast and rainfall of <b>24.9 mm</b> was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.</p>	<p><b>Weather forecast for next five days of Ukhrul (8<sup>th</sup> to 12<sup>th</sup> April, 2017)</b>  Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 28-30 °C &amp; minimum temp.19-20 °C. Relative humidity may reach up to 83 %- (max RH) &amp; 40 % (min RH). The average wind speed may be 3-4 km/hr.</p>
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<b>Field Crops</b>			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	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.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
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**Horticulture Crops**

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Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
<b>Tomato/ Brinjal</b>	Vegetative		- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.
<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	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 <sub>2</sub> 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.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapiar Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

**Fisheries**

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

**(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**7<sup>th</sup> April, 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 8<sup>th</sup> to 12<sup>th</sup> April, 2017 as below:

<p><b>Significant past weather for the preceding bi-weekly of Imphal - West (4<sup>th</sup> to 6<sup>th</sup> April, 2017)</b>  Observed mainly cloudy to overcast and rainfall of <b>24.9 mm</b> was recorded during past three days. Maximum temperature range of 16.9 to 25.0 °C and minimum temperature range of 14.3 to 15.4 °C with mean relative humidity 92.3 % max and 75.3 % min was recorded in the past four days. The average wind speed range remained 3.8 to 4.8 km/hr.</p>	<p><b>Weather forecast for next five days of Imphal East (8<sup>th</sup> to 12<sup>th</sup> April, 2017)</b>  Likely to have thunderstorm accompanied with squall/ hail at isolated places over Manipur upto Sunday and partly cloudy to mainly cloudy sky with maximum temp. 28-30 °C &amp; minimum temp.19-20 °C. Relative humidity may reach up to 97 %- (max RH) &amp; 51 % (min RH). The average wind speed may be 2-5 km/hr.</p>
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<b>Field Crops</b>			
Name of the crop	Stage	Pest and disease	Agro-meteorological advisories
<b>Rice</b>	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.
	Land preparation (Main kharif rice)		- Prepare main plots for ploughing.
<b>Rabi maize</b>	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.
<b>Seeds storage</b>	Post harvest management		- For seed purpose dry, clean and store the seeds in <b>RC-seed bins</b> 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 <b>godowns</b> .

**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 cauliflower
- 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 and come up to optimum soil moisture level for cultivation, hence it will be helpful if 8-10% of the water logged area 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
<b>Ginger &amp; Turmeric</b>	Planting		- Recommended varieties: For turmeric: Megha turmeric For ginger: Nadia - Use healthy mother rhizome of 25-30g weight and plant at a spacing of 1 ft x 1 ft. Treat the seed with fungicide like Carbendazim @ 2gm/kg seed with dry or wet method. If wet method is applied then treated seed should be allowed to dry in shed before planting. - Planting may be delayed till the field conditions permit.
<b>French Bean</b>	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 hawai) at 60x60 cm with 2-3 seeds per hill. Apply 12-13 kg Urea, 94 kg SSP and 20 kg MOP per sangam at the time of sowing.
<b>Cucurbits</b>	Vegetative		- Construct proper drainage system to avoid water logging in and around the crop field. Drain out excess water.
<b>Bhindi</b>	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.



**ICAR Research Complex for N.E.H. Region**

**Manipur Centre, Lamphelpat, Imphal - 795 004**

**“Gramin Krishi Mausam Seva”**



			Recommended varieties are - Arka Anamika and Pusa Sawani
<b>Chilli/ capsicum</b>	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.
<b>Tomato/ Brinjal</b>	Vegetative		- After rains apply 38kg Urea+ 125kg SSP+ 24kg MOP per sangam as basal dose and 25kg Urea after 25-30days after tansplanting.
<b>Onion/ Garlic</b>	Bulb formation to maturity	Leaf minor/ Thrips	- Spray Dichlorovos 36 EC @ 0.5ml/lit of water or Monocrotophos 76EC @ 1ml/lit of water to protect the crop from infestation of leaf minor. Spray is to be given twice or thrice at an interval of 7 to 10 days.
		Purple Bloch	- Apply 1kg Trichoderma viride/ sangam when there is moisture in soil and avoid excess application of Nitrogen in case of onion and garlic to avoid Purple Bloch.

**Animal Sciences**

**Name of the animal**

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

<b>Name of bird/ animal</b>	<b>Stage</b>	<b>Disease and Management</b>	<b>Agro-meteorological advisories</b>
<b>Poultry (Chicken/ Turkey/ Duck)</b>	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 <sub>2</sub> 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.
<b>Sheep/ Goat</b>	All age groups excepts the young ones	Management	Use Butox @2ml in ltr of water and brush with the medicated water at forth night interval.
		Deworming	New born but not yet been dewormed should be given deworming agent.
<b>Pig</b>	All age groups except the young ones	De-worming	➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt.
		Care and management	Provide clean water (drinking). Add antibiotics in feed and water. Vaccinate against FMD.
<b>Cattle</b>	All age groups excepts the young ones	Mites infestation	➤ Spray with Skin Heal Spray in sufficient quantity.
		Deworming	➤ Give Piperazine liquid @ 10-15ml orally once only.
		B.Q./ H.S/FMD	➤ If not vaccinated, give vaccine for Black Quarter now, Haemorrhagic septicaemia, Foot & Mouth Disease, etc.
		Ectoparasites	- Butox@ 2ml/lit of water at forth nightly interval.
		Mastitis	Animals should be milked completely.
		Fodder cultivation	Fodder crops should be irrigated every 20-30 days and 20-22 days for oat cultivation.
		Milk Fever	Provide minamil/ mineral mixture @ 50-60 gm/ orally in the food.
		Perennial fodder grass	Suckers/ cuttings of hybrid wapiar Gunea grass may be transplanted in prepare fields after rains.
		Maize/ Bajra/ Jawar	Maize/ Bajra/ Jawar may be sown for use as green fodder.

**Fisheries**

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**MANIPUR BULLETIN**7<sup>th</sup> April, 2017**Imphal West**

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<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Rice</b>	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.
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**Animal Sciences**

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