



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

**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Churachandpur (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 26 – 28 °C & minimum temp. 9 - 11 °C. Relative humidity may reach up to 97 % (max RH) & 28 % (min RH). The average wind speed may be 4 km/hr. Wind direction may be South Easterly to Southerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

**Animal Sciences**

<b>Name of the animal</b>			
<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	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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



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**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Senapati (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 22 – 25 °C & minimum temp. 5 - 7 °C. Relative humidity may reach up to 95 % (max RH) & 28 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly to Easterly upto 19<sup>th</sup> then South westerly to westerly thereafter during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliqua formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliqua is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

### Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

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**Weather forecast for next five days of Tamenglong (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 26 – 28 °C & minimum temp. 9 - 11 °C. Relative humidity may reach up to 97 % (max RH) & 31 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South easterly to South westerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
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		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

(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****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Thoubal (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 25 – 27 °C & minimum temp. 8 - 10 °C. Relative humidity may reach up to 93 % (max RH) & 28 % (min RH). The average wind speed may be 4 km/hr. Wind direction may be South easterly to Westerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

### Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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

**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Ukhrul (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 23 – 25 °C & minimum temp. 5 - 7 °C. Relative humidity may reach up to 93 % (max RH) & 28 % (min RH). The average wind speed may be 3-4 km/hr. Wind direction may be South westerly to North westerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliqua formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliqua is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqua mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

**Animal Sciences**

<b>Name of the animal</b>			
<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	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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

**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Imphal East (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 26 – 27 °C & minimum temp. 9 - 10 °C. Relative humidity may reach up to 96% (max RH) & 30% (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly to Easterly upto 19<sup>th</sup> Feb then South Westerly to Westerly thereafter during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>- Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

**Animal Sciences**

<b>Name of the animal</b>			
<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	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

(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****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Imphal West (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 25 – 26 °C & minimum temp. 8 - 10 °C. Relative humidity may reach up to 96 % (max RH) & 30 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North Easterly to Easterly upto 19<sup>th</sup> then South westerly to westerly thereafter during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>- Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>





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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

### Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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

**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Bishnupur (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 26 – 27 °C & minimum temp. 9 - 10 °C. Relative humidity may reach up to 95 % (max RH) & 27 % (min RH). The average wind speed may be 4 km/hr. Wind direction may be South Easterly to South Westerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>-Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliqueae mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery rising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

### Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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

**MANIPUR BULLETIN****17<sup>th</sup> February, 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 18<sup>th</sup> to 22<sup>nd</sup> February, 2017 as below:

**Significant past weather for the preceding bi-weekly of Imphal - West (14<sup>th</sup> to 16<sup>th</sup> February, 2017)**

Observed mainly clear sky with no rainfall during past three days. Maximum temperature range of 24.9 to 26.6 °C and rise in minimum temperature range of 6.7 to 7.9 °C with mean relative humidity 85.3 % max and 33.7 % min was recorded in the past three days. The average wind speed range remained 3.0 to 4.9 km/hr.

**Weather forecast for next five days of Chandel (18<sup>th</sup> to 22<sup>nd</sup> February, 2017)**

Likely to have no rain upto Wednesday. Mainly clear to partly cloudy sky with maximum temp. 26 – 28 °C & minimum temp. 9 - 11 °C. Relative humidity may reach up to 92 % (max RH) & 31 % (min RH). The average wind speed may be 3-5 km/hr. Wind direction may be South Easterly to South Westerly during next five days.

<b>Field Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Pre-Kharif rice</b>	Nursery to transplanting		<ul style="list-style-type: none"> <li>- Treat seeds with Carbendazim @ 2g/kg of seeds.</li> <li>- Select pure, well filled, disease free and cleaned seeds. Seed rate is 60kg/ 700 m<sup>2</sup> of nursery bed.</li> <li>- Transplant the seedling at 20-25 days after sowing.</li> </ul>
<b>Potato</b>	Tuber development to maturity	Late Blight	<ul style="list-style-type: none"> <li>- Give light irrigation to keep soil moist.</li> <li>- As a prophylactic measure against late blight, spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 gm/ water at 14 days interval for 2-3 times.</li> </ul>
<b>Rapeseed/ Mustard</b>	Siliquea formation to maturity		<ul style="list-style-type: none"> <li>- Harvest the crops when the color of leaves, stem &amp; siliquea is pale green to yellow, seeds are dark and produce rattling sound on shaking and 75% of the siliquea mature. It must be harvested during morning before drying of dew to avoid shattering f pods.</li> </ul>
<b>Pulses</b>	Fruiting to harvesting		<ul style="list-style-type: none"> <li>- Light irrigation after flowering and pod formation stages.</li> <li>- Retain healthy and early pods of selected plants for seeds.</li> </ul>
<b>Rabi maize</b>	Vegetative		<ul style="list-style-type: none"> <li>- Earthing-up of rabi maize sown intercropped with pea or potato may be done and apply irrigation at an interval of 10-15 days to maintain moisture status.</li> <li>- When the plant is knee high apply fertilizer @ 25 kg N/ha at the time of inter-culture operation.</li> </ul>
		Stem borer	<ul style="list-style-type: none"> <li>- To control the infestation of stem borer, apply few granules of Carbofuran 3G at maize whorl.</li> </ul>
<b>Seeds storage</b>	Post harvest management		<ul style="list-style-type: none"> <li>- 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.</li> <li>- After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in <b>godowns</b>.</li> </ul>
<b>Horticulture Crops</b>			
<b>Name of the crop</b>	<b>Stage</b>	<b>Pest and disease</b>	<b>Agro-meteorological advisories</b>
<b>Cucurbits</b>	Nursery raising to land preparation for transplanting in open field		<ul style="list-style-type: none"> <li>- Go for nursery raising in polybags (size: 8cm X 10cm) under low cost polyhouse. In the 50 kg mixture of garden soil, sand and FYM in the ratio 2:1:1 incorporate 2gm Captan 50W.P. One seed is sown per polybag and kept covered with polythene sheet till the seeds sprout.</li> <li>- Prepare land for transplanting 4-5 leave stage cucurbits seedlings in open field.</li> </ul>
<b>French bean and Bhindi</b>	Land Preparation to sowing		<ul style="list-style-type: none"> <li>- Land preparation for sowing may be started.</li> <li>- Sowing of French bean and bhindi may be started.</li> </ul>
<b>Brinjal/ chilli</b>	Nursery to land preparation for transplanting		<ul style="list-style-type: none"> <li>- Raise nursery.</li> <li>- Land preparation for transplanting of brinjal/ chilli may be done.</li> </ul>
<b>Tomato</b>	Transplanting to vegetative		<ul style="list-style-type: none"> <li>- 25 to 30 days old tomato seedlings may be transplanted in prepared land incorporated with well decomposed FYM at a spacing of 40-45cm x 50-60cm during evening/ cloudy day. Apply Sevin dust @ 2.5 – 5.0 g/ hill at the time of transplanting to protect the seedlings from caterpillar/ cutworm. Bleaching powder may also be applied @ 15kg/ ha to prevent bacterial wilt.</li> <li>- Apply 75:30:60 kg of NPK at the time of transplanting.</li> <li>- A light irrigation should be given just after transplanting</li> <li>- Light watering may be done to maintain soil moisture.</li> </ul>



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**“Gramin Krishi Mausam Seva”**



<b>Garden pea/ Broad bean</b>	Flowering and fruiting to harvesting		- Light watering may be done to maintain soil moisture. - Earthing up and top dressing with 20kg urea per ha followed by watering may be advised to the farmers.
		powdery mildew and yellow rust	- Spray Bayleton @ 7 g/ 10 litres of water against powdery mildew and yellow rust especially to the crops grown in moist/ shady area.
<b>Onion/ Garlic</b>	Vegetative to bulb formation		- Light and frequent irrigation is required to keep the soil moist throughout the growing period/ vegetative phase. - 30 to 45 days old transplanted onion should be top dressed with 20-25 kg urea/ sangam depending upon the fertility.
<b>Cabbage/ Cauliflower/ Broccoli</b>	Head formation and harvesting		- Light watering may be done to maintain soil moisture.
		Plutella, Daimond Black Moth	Spray Dichlorovos 76 EC @ 1ml/ lit of water may be sprayed at 7 days interval depending upon the severity of the infestation.
<b>Coriander</b>	Vegetative to flowering and late sowing		- Light watering may be done to maintain soil moisture. - For late, treat seed with Trichoderma harzianum @ 4g/kg seed is recommended to protect against soil borne diseases.
<b>Intercropping of Coriander &amp; French Bean</b>	Sowing		Intercropping of French bean and coriander may be done- i) Maintain a spacing of 30 cm (1 ft) row to row in case of coriander ii) Sow French bean seed in between the rows of coriander after 7-10 days of sowing coriander.
<b>Intercropping of cabbage and French bean</b>	Sowing/ Transplanting		Sow French Bean seed in between the rows of cabbage after 10 days of transplanting. Maintain a spacing of 60 cm from row to row

### Animal Sciences

Name of the animal			
Name of bird/ animal	Stage	Disease and Management	Agro-meteorological advisories
<b>Poultry (Chicken/ Turkey/ Duck)</b>	All age groups	Care & management	- Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. - Adequate measures must be taken up to protect birds from wet weather and drop in temperature if sudden rainfall occurs. - Poultry farming of layer type birds can be started now.
		Ranikhet disease	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).
		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	- Avoid keeping animals in a damp area; provide warmth to prevent from pneumonia.
		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	➤ Mineral mixture be added in feed @ 10-20 g/adult animal. ➤ Treat drinking water with potassium permanganate/ sanitizer. ➤ Provide ample ventilation in the shed/ dry bedding. Avoid dampness in sheds
<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.

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