



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



MANIPUR BULLETIN
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Tamenglong (14 th to 18 th December, 2016) |
|--|---|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 22 – 24 °C & minimum temp. 5 - 6 °C. Relative humidity may reach up to 100 % (max RH) & 45 % (min RH). The average wind speed may be 3-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

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



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Thoubal

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Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
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| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

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Ukhrul

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| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Ukhrul (14 th to 18 th December, 2016) |
|--|--|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 18 – 20 °C & minimum temp. 2 - 4 °C. Relative humidity may reach up to 98 % (max RH) & 47 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|---|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
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| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
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| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
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| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

(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
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Imphal East (14 th to 18 th December, 2016) |
|--|--|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 24 – 25 °C & minimum temp. 5 - 7 °C. Relative humidity may reach up to 100 % (max RH) & 42 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North East Easterly to Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

(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
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Imphal West (14 th to 18 th December, 2016) |
|--|---|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 24 – 25 °C & minimum temp. 5 - 7 °C. Relative humidity may reach up to 100 % (max RH) & 43 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be North East Easterly to Southerly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| | | | 30x45 cm plant spacing. |
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos(1.5%)dust* chaibiyu

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



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



MANIPUR BULLETIN
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Bishnupur (14 th to 18 th December, 2016) |
|--|---|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 23 – 25 °C & minimum temp. 6 - 7 °C. Relative humidity may reach up to 100 % (max RH) & 48 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

(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
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Chandel (14 th to 18 th December, 2016) |
|--|--|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 22 – 24 °C & minimum temp. 5 - 6 °C. Relative humidity may reach up to 99 % (max RH) & 51 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|---|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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ICAR Research Complex for N.E.H. Region

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

(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
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Churachandpur (14 th to 18 th December, 2016) |
|--|---|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 23 – 24 °C & minimum temp. 4 - 6 °C. Relative humidity may reach up to 100 % (max RH) & 50 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--------------------|-------------------------|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |

Horticulture Crops

* Light watering during morning hours is advised.

* In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature.

| | | | |
|-----------------------------|--|--|---|
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

(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
13th December, 2016

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 14th to 18th December, 2016 as below:

| Significant past weather for the preceding bi-weekly of Imphal - West (9 th to 12 th December, 2016) | Weather forecast for next five days of Senapati (14 th to 18 th December, 2016) |
|--|--|
| Observed clear sky and no rainfall in the past four days. Maximum temperature range of 23.3 to 25.0 °C & Minimum temperature of 5.8 to 6.4 °C with mean relative humidity 89.7 % max and 49 % min was recorded in the past three days. The average wind speed range remained 2.1 to 3.5 km/hr. | Likely to have no rain upto Sunday. Shallow to moderate fog very likely at isolated places during next 2-3 days and mainly clear sky during day time with maximum temp. 18 – 20 °C & minimum temp. 2 - 4 °C. Relative humidity may reach up to 99 % (max RH) & 41 % (min RH). The average wind speed may be 2-4 km/hr. Wind direction may be South Easterly during next five days. |

Weather Forecast for next 5 days * upto 0830 hours IST of 14th December, 2016

Shallow to moderate fog at few places over Manipur during next 2days

| Name of the crop | Stage | Pest and disease | Agro-meteorological advisories |
|--|--|------------------|---|
| Field Crops | | | |
| Potato | Early vegetative | | <ul style="list-style-type: none"> - Light watering during morning hours may be done to keep soil moist for good early vegetative growth. |
| Rapeseed/ Mustard | Vegetative | | <ul style="list-style-type: none"> - After 10-15 days of sowing thinning may be if the plant population is high. Apply foliar application of urea {5 pumps per sangam @ 10g/pump}. - If soil is dry and irrigation facility is available, irrigate the field to maintain soil moisture status. |
| Pulses | Vegetative | | <ul style="list-style-type: none"> - Give light irrigation to pea and lentil just to keep soil moist during vegetative stage. - Plant to plant distance may be maintained by thinning. |
| | | Aphid | <ul style="list-style-type: none"> - Spray Cypermethrin @2ml/lit of water or Nuvan @ 0.5ml/ lit of water against aphid. - For organic control against aphid, sprays that consist of azadirachtin, neem oil or pyrethrin may be used. |
| Rabi maize | Land preparation | | <ul style="list-style-type: none"> - Land preparation for sowing rabi maize may be started. - Rabi maize may be sown as intercrop with pulses. 60cm width 40cm high ridges along east-west may be prepared after ploughing. Southern face may be sown with maize and northern with pea seeds. - It may be intercropped with rapeseed/ lentil/ pea. |
| Seeds storage | Post harvest management | | <ul style="list-style-type: none"> ➤ For seed purpose dry, clean and store the seeds in RC-seed bins after proper drying of seeds along with charcoal at 80:20. Check for moisture content or weight of seeds. After proper drying, store grains in well ventilated godowns. Spray Malathion 1% in godowns. |
| Horticulture Crops | | | |
| * Light watering during morning hours is advised. | | | |
| * In fruit crops and perennial vegetables, apply organic mulches after earthing up and weeding to conserve residual soil moisture as well as to maintain the soil temperature. | | | |
| Rabi Vegetable (cole crops) | Transplanting and early vegetative | | <ul style="list-style-type: none"> - If yellowing of leaves of mature seedlings is observed, spray Carbendazim @ 1g/ lit of water. - Transplant 26-30 days old seedlings (4 leaves stage) cole crops. - If there is incidence of leaf eating caterpillar, spray Flubendiamide (Fame) @ 2ml/ 10 lit of water. |
| Broad bean | Early vegetative | | <ul style="list-style-type: none"> - Broad bean may be sown. Avoid sowing in damped and shed area as the crops are prone to fungal disease. |
| Colocassia | Maturity to harvesting | | <ul style="list-style-type: none"> - Mature crops may be harvested. |
| Onion | Transplanting of raised seedlings and early vegetative | | <ul style="list-style-type: none"> - 45-60 days old onion seedlings may be transplanted. - Thinning of onion nursery may be followed if there is shortage of land and manpower for transplanting. Give light irrigation during morning and evening hours till the plant get established. |
| Garlic | Planting to early vegetative | | <ul style="list-style-type: none"> - Garlic bulblets may be planted. - Give light irrigation during morning and evening hours to keep soil moist. |
| Broccoli | Transplanting | | <ul style="list-style-type: none"> ➤ Transplanting of 25-30 days old broccoli having 3-4 leafs may be done with |



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“Gramin Krish Seva”



30x45 cm plant spacing.

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

Manipur Centre, Lamphelpat, Imphal - 795 004

“Gramin Krishi Mausam Seva”

| | | | |
|------------------------|-----------------------------------|--|---|
| Cauliflower | Transplanting to early vegetative | | <ul style="list-style-type: none"> - Transplanting of 26-30 days old seedlings may be done. - Apply Tracel @ 300gm/ sangam in 30-35days old cauliflower to avoid leaf curling, development of purple coloured vein due to absence of micronutrient. If required repeat it after 10 days. * Apply <i>Chloropyriphos (1.5%) dust</i> @25 kg /ha to the cauliflower/ cabbage infested by cut-worms. |
| Coriander | Sowing to early vegetative | | <ul style="list-style-type: none"> - Select area with full sunshine rich in organic matter for preparing beds. Treat soil using Dichlorovos @ 1ml/ litre of water 2-3 days before sowing to protect seeds from ant and other insects. - Apply 200-250 kg of FYM (@ ½ cart load) in 100 sq. m and mix thoroughly to improve soil fertility. Seed rate is 100g seeds for 100 sq. m. |
| Spinach (Palak) | Sowing to early vegetative | | <ul style="list-style-type: none"> - Avoid damping off by adding Captan 50WP in the soil of bed. Spacing may be maintained at 10cm x 20-25cm apart. Seed rate is 100-120g/ 100 sq m. If broadcasting is done, double the dose is required. |
| Tomato | Nursery | | Nursery raising may be done. |

Animal Sciences

| Name of the animal | Growth stage | Disease/ infestation | Agro-meteorological advisories |
|--|---------------------------------------|----------------------|---|
| Poultry (Chicken/ Turkey/ Duck) | All age groups | Care & management | Protect from sudden drop in temperature. Keep the shed wall covered with hessian cloth during night. Proper ventilation must be provided to protect from moisture inside the shed. Litter must be kept dry. |
| | | 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. |
| | | Coccidiosis | Provide Amprolium Solution to protect from coccidiosis @ 1 gm/litre drinking water for 7 days. |
| Sheep/ Goat | All age groups excepts the young ones | Vaccination | ➤ Vaccinate against sheep/ goat pox and Enterotoxaemia. |
| | | De-worming | ➤ De-worming of animals should be done using Abendazole/ Levamisole @7.5 mg/kg b.wt. or Ivermectin @50mg/kg b. wt. |
| Pig | All age groups except the young ones | Care and management | <ul style="list-style-type: none"> ➤ 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 |
| | | Mites infestation | ➤ Spray with Skin Heal Spray in sufficient quantity. |
| | | Deworming | ➤ Give Piperazine liquid @ 10-15ml orally once only. |
| Cattle | All age groups excepts the young ones | 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 night. |
| | | Care & management | Oat/ Bersum seeds must be sown from the middle of this month. |
| | | Mastitis | Adequate care must be taken to prevent occurrence of Masitis. |
| | | Diarrhoea & Acidosis | Limited quantity of green fodder must be given in animal feed. |

Fishery:

| Type of Farming | Stage | Management | Agro-meteorological advisories |
|------------------------------|----------------------------------|------------|---|
| Carp/ Catfish culture | Harvesting and stock maintenance | | <ul style="list-style-type: none"> - Stocking of fish for next year may be done in ponds having 1.5m water depth @ 10,000/ ha. - Feeds should be provided @ 3 % body weight per day. - Well balanced feed fortified with vitamins and minerals should be provided. - Apply Lime @ 30-35 kg/ha at 30days interval. |

SMS Manipuri

Lakliba Yumjakeisa faoba nong leite.Ishing watpa loufamda ishing thajinbiduna leibakta ishing wattanaba semsabiyu amadi yaribamakhei ishing yoknaba hotnabiyu.Henna kungna houjinba hangam singdagee panbi khara satokpiyu.Kobi mana chathokpa tin ngakthoknaba ha amada 25kg*Chloropyriphos (1.5%) dust* chaibiyu

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