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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0 hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
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**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
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| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
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**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
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| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
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| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
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| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
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**Weather during the previous forecast period**

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**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
| **Bulletin No. 87**  **Date: Tuesday, 4th December , 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** | **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 25.8°C and 11.0°C, respectively. Average relative humidity was 83 percent at 0700 hrs. and 51 percent at 1400 hrs. Soil temperature at 5 cm depth was 14.5°C at 0700 hrs. and 23.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.1km/hr, 6.0hours and 1.9mm, respectively. Dry weather prevailed during the previous forecasting period. Early morning fog was observed.

**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
| *Rabi* Maize | Sowing | * Complete the sowing of *rabi* maize at the earliest. * Weeding is advised in 25-30 days old maize crop. Give light irrigation based on moisture condition of the field. |
| Potato | Planting | * Complete the planting of potato at the earliest. * Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation as per need. |
| *Rai* | Sowing/  weeding | Complete the sowing of late varieties of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* at the earliest. Weeding is advised in 20-25 days old *rai* crop. Thinning is advised to maintain plant to plant spacing at 12-15 cm. |
| Fodder crops | Sowing | Sowing of fodder crops such as barseem and oat is advised for milch animals. Seed rate@20kg/hectare for barseem and 80 kg/hectare for oat crop is advised. |
| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
| Garlic | Vegetative | Weeding is advised. Give light irrigation in garlic at a regular interval in view of low soil moisture and dry condition. |
| Rabi onion | Seedlings | Farmers are advised to remove weeds from onion nursery at the regular interval of 7-10 days. Give light irrigation after weeding. Protect the nursery seedlings from insect-pest and disease infestation. |
| Vegetables | - | * Weeding is advised. Give irrigation as per status of soil moisture. * Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato,chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised. Infested fruits and shoots should be collected and buried before spraying. |
| Animal care: | Milch animals | Falling trend of temperature may adversely affect the milk production of milch animals. Farmers are advised to give protein enriched diets to the animals. Do not keep the animal in the open. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)**  **AGRO-METEOROLOGY DIVISION**  **Dr. Rajendra Prasad Central Agricultural University, Pusa**  **Samastipur, Bihar -848 125** | | |
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**Medium Range Weather Forecast**

**(5-9 December, 2018)**

**(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **5**  **December** | **6**  **December** | **7**  **December** | **8**  **December** | **9**  **December** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **26** | **26** | **26** | **26** | **-** |
| **Mini. T (°C)** | **12** | **11** | **11** | **10** | **10** |
| **Cloud cover (okta)** | **4** | **2** | **0** | **0** | **0** | **Cloudy sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Sowing | * Low level of soil moisture in the fallow land (after harvesting of paddy) would affect germination of seeds. For proper germination and crop stand, pre-sowing irrigation is advised. * Farmers are advised to complete the timely sown wheat crop at the earliest. Farmers are also advised to give light irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30kg nitrogen per hectare is advised 2-3 days after irrigation. * Farmers are advised to start sowing of late variety of wheat crop. *PBW-373, HD-2285, HW-2045, HUW-234, WR-544, DBW-14, HD-2643, HD-2967, NW-2036* varieties are recommended for late sowing in North Bihar. Farmers are also suggested to procure good quality of seeds of wheat from reputed sources. * Application of 40 kg nitrogen, 40 kg phosphorus and 20 kg potash per hectare is advised during land preparation for late sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 150kg per hectare is advised and 125 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. * Seed treatment with chlorpyriphos 20EC@ 8 ml/kg of seeds is advised in termite affected land. |
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| Gram | Sowing | Farmers are advised to complete the sowing of gram till 10th December. To protect against *Kajra caterpillar (cut worm)*, seeds should be treated with [Chlorpyrifos@ 8ml/kg. Before](mailto:chlorpyrifos@8ml/kg.Before) sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. |
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**(A. Sattar)**

**(Nodal Officer)**