|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13March, 2019)**

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**

|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 19****Date: Friday, 8th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 26.8°C and 9.9°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 50 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.5°C at 0700 hrs and 26.1°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.2km/hr, 6.8hours and 3.4mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(9-13thMarch, 2019)**

 **(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****March** | **10****March** | **11****March** | **12****March** | **13****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **27** | **27** | **28** | **29** | **29** | **-** |
| **Mini. T (°C)** | **9** | **10** | **10** | **11** | **12** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **1** | **0** | **Mainly clear sky**  |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **65** | **65** |  |
| **Min Relative Humidity (%)** | **55** | **55** | **50** | **50** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of dry weather during the forecast period, farmers are advised to harvest mustard and potato crops by giving top priority. Farmers are also advised to provide irrigation in summer maize, sunflower, fodder crop and vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bitter gourd. Ensure the proper soil moisture in the land before sowing of summer crops for better germination and early crop stand. |
| *Rabi* Maize/wheat | Grain forming/Milking stage | Farmers are advised to maintain proper soil moisture in the *rabi* maize/wheat crop which is in grain forming/Milking stage. Lack of soil moisture results adverse impact on crop yield. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised in last month sown crop.
* Monitoring of red pumpkin beetle is advised in cucurbitaceous vegetables, which are in seedling stage. This is a very harmful insect pest. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation result in the death of the plant or retardation of growth. Dusting of Chlorpyriphos 2% dust @20 kg/hectare near root of the plant is advised for control of grubs infestation. Spraying of Dichlorvos76EC@1 ml/liter of water is advised in severe cases.
* Monitoring is advised for infestation of leaf hopper/Jassid in early sown lady’s finger. This is a very serious insect pest. The damage is caused due to sucking of sap by greenish colored nymph and adult of hoppers, which lead to curling and crinkling of leaves. In case of heavy infestation the leaves turn brick red and crumble. If hopper crosses ETL (5 hoppers/plant), spraying of Imidacloprid @ 0.5ml/liter of water is advised.
 |
| Green gram/Black gram | Land preparation/Sowing | Land preparation/ sowing of green gram *(mung bean)*& black gram *(urd)* is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal, Samrat, SML-668, HUM-16 and Sona* varieties for *mung bean* and *Pant Urd-19 and Pant Urd-31, Uttra and Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture.  |
| Elephant foot yam | Land preparation | Land preparation is advised for sowing of elephant foot yam. Application of 10-15 ton FYM, 40 kg Nitrogen, 60kg Phosphorus and 80 kg Potash per hectare is advised during land preparation. *Gajendra* variety is recommended for sowing in North Bihar.  |
| Onion | Vegetative | * Regular monitoring is advised for thrips infestation in onion. The adults as well as nymphs damage the crop. The leaves of damaged plant become curled, wrinkled and gradually dry up. The damaged plants do not form bulbs. If the insect population is above ETL, spraying of Profenofos@1ml/L or Imidacloprid @1ml/4 liter of water is advised.
* Weeding is advised in onion crop. Provide light and frequent irrigation at an interval of 10-12 days as per requirement..
 |

**(A. Sattar)**

**(Nodal Officer)**