|  |
| --- |
| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **3** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **2** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **4** | **4** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **1** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **4** | **4** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **4** | **4** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **4** | **4** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **1** | **1** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **2** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(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. 23****Date: Saturday, 23 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 32.5°C and 13.3°C, respectively. Average relative humidity was 74 percent at 0700 hrs and 42 percent at 1400 hrs. Soil temperature at 5 cm depth was 20.6°C at 0700 hrs and 31.3°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.2km/hr, 8.6hours and 5.5mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(23-27 March, 2019)**

 **(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****March** | **24****March** | **25****March** | **26****March** | **27****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Light rainfall around 26 March** |
| **Max. T (°C)** | **33** | **33** | **33** | **32** | **31** | **-** |
| **Mini. T (°C)** | **14** | **14** | **15** | **15** | **14** |
| **Cloud cover (okta)** | **0** | **0** | **4** | **4** | **3** | **Cloudy sky during 25-27 March** |
| **Max Relative Humidity (%)** | **75** | **75** | **70** | **70** | **65** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **40** | **40** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Easterly** | **Westerly** | **Easterly** | **Westerly/Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| In view of light rainfall around 26 March, farmers are advised to postpone irrigation in standing crops. Farmers are also advised to spray pesticides in the crop when weather remains clear. |
| Green gram/Black gram | Sowing | Present weather is favorable for sowing of green gram *(mung bean)* & black gram *(urd)*. Hence, farmers are advised to sow these crops as priority bases. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg 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/Sowing | Sowing of elephant foot yam is advised. 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. Seed should be treated with *trichoderma viridi* before sowing. Seed rate@ 80 quintals/hectare is advised. |
| Fodder crop | Sowing | Sowing of *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested.  |
| Vegetables | Sowing/Seedlings/Early vegetative | * Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady’s finger, pumpkin, cucumber, sponge gourd, bottle gourd.
* 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. In severe cases,spraying of Dichlorvos76EC@1 ml/liter of water is advised.
* Monitoring is advised for insect–pest infestation in okra. If infestation occurs, spraying of Malathion 50EC or Dimethoate 30EC @ 1.0ml/liter of water is advised.
* Monitoring is advised for aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Onion | Vegetative/Bulb initiation | 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.Add sticker@ 1ml/L of water for better result. |

**(A. Sattar)**

**(Nodal Officer)**