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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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.
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| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **Bulletin No. 21****Date: Friday, 15th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

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**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
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| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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.
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 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  March,2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

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**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
* Remove the affected inflorescence from the orchard.
* Apply Bordeaux paste (1kg lime + 1 kg copper sulfate+ 10 liters water) in the mango stem.
* Do not apply irrigation at this stage. Irrigation may be applied after fruit attaining the size of pea.
 |
| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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| **GRAMIN KRISHI MAUSAM SEWA (GKMS)****AGRO-METEOROLOGY DIVISION****Dr. Rajendra Prasad Central Agricultural University, Pusa****Samastipur, Bihar -848 125** |
| **Bulletin No. 21****Date: Friday, 15th  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 32.0°C and 14.3°C, respectively. Average relative humidity was 73 percent at 0700 hrs and 38 percent at 1400 hrs. Soil temperature at 5 cm depth was 18.4°C at 0700 hrs and 30.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 3.3km/hr, 8.2hours and 4.7mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(16-20 March, 2019)**

 **(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
| **Max. T (°C)** | **32** | **33** | **33** | **34** | **34** | **-** |
| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **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, farmers are advised to harvest mustard and potato crops by giving top priority. Provide irrigation in standing crop such as late sown wheat, maize and vegetables.  |
| Green gram/Black gram | Sowing | Sowing of green gram *(mung bean)*& black gram *(urd)* is advised. 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. Ensure the proper soil moisture before sowing. |
| 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 *Sweet jowar* (multicut) and *Kohwa* varieties of jowar is advised. Cowpea is intercropping with jowar is suggested. *Affrican tall* variety of maize is also advised for sowing as fodder crop. |
| Vegetables | Sowing | * Complete the sowing of summer vegetables. 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 aphid infestation in vegetables and other crops. If insect population is above ETL, spraying of Imidacloprid @ 1ml/3 liters of water is advised.
 |
| Mango | Flowering  | Mango farmers are advised to follow these instructions.* Do not spray any pesticide during the period from flowering till the time mango fruit becomes pea sized.
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| Onion | Vegetative | Weeding is advised in onion crop. 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. |

**(A. Sattar)**

**(Nodal Officer)**

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

**(16-20 March, 2019)**

 **(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **16****March** | **17****March** | **18****March** | **19****March** | **20****March** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Mainly dry weather**  |
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| **Mini. T (°C)** | **17** | **17** | **18** | **18** | **19** |
| **Cloud cover (okta)** | **2** | **2** | **6** | **0** | **0** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **65** | **65** | **65** | **70** | **70** |  |
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| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **10** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** | **Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
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**(A. Sattar)**

**(Nodal Officer)**