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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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Begusarai)**

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| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **10** | **5** | **5** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **5** | **5** | **20** | **10** | **30** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(East Champaran)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **15** | **20** | **30** | **40** | **50** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Gopalganj)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **9** | **50** | **60** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **5** | **20** | **40** | **10** | **20** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Muzaffarpur)**

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| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **5** | **20** | **30** | **50** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **5** | **0** | **50** | **20** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Saran)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **60** | **30** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **5** | **5** | **30** | **40** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

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**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **10** | **15** | **25** | **40** | **50** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(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. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Siwan)**

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| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **5** | **5** | **60** | **50** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

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| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(A. Sattar)**

**(Nodal Officer)**

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| **Bulletin No. 57**  **Date: Friday, 19 July,2019** | **Description: 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 36.6°C and 26.0°C, respectively. Average relative humidity was 91 percent at 0700 hrs and 72 percent at 1400 hrs. Soil temperature at 5 cm depth was 31.2°C at 0700 hrs and 36.2°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 5.0km/hr, 6.5 hours and 3.2mm, respectively. Dry weather prevailed during the previous forecasting period.

**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(Vaishali)**

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| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **40** | **20** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

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| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| *Kharif* paddy | Transplanting | * Looking to see the rainfall forecast, farmers are advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. * Farmers are advised to take action for controlling of weeds in the rice field within 3 to 7 days of transplanting by spraying a solution of [*Butachlor@3.0*](mailto:Butachlor@3.0) *liters or* [*Pritlachlor@1.5liter*](mailto:Pritlachlor@1.5liter)*s or* [*Pendimethaline@3.0*](mailto:Pendimethaline@3.0) *liters* in 500-600 liters of water applicable for one hectare. |
| Pigeon Pea *(Arher)* | Sowing | Sowing of Pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13* varieties of pigeon pea are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha is advised during land preparation. Seed rate@ 18-20 kg/ha is suggested. Seed should be treated with thiram/Capton @2.5gm/kg of seed. |
| *Kharif* onion | Seedling stage | Weeding is advised. Onion nursery should be covered by net at the height of 6-7 feet for protection against rainfall/scorching sunlight. Protect the nursery crop against infestation of damping off disease. |
| Fruit/ Forestry plants | Planting | * Present weather is favorable for planting of new saplings of fruit plants (Mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant. * Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties. * Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger),BRS-1* are the dwarf varieties, which are recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel*,PHIA-3 varieties are used for vegetable purposes and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are used for both vegetables and fruits. The planting distance should be 2.0x2.0 meters for tall varieties and 1.5x1.5 meters for dwarf varieties. |
| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(A. Sattar)**

**(Nodal Officer)**

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| **Bulletin No. 57**  **Date: Friday, 19 July,2019** | **Description: F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

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**Medium Range Weather Forecast**

**(20-24 July, 2019)**

**(West Champaran)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **20**  **July** | **21**  **July** | **22**  **July** | **23**  **July** | **24**  **July** | **Remarks** |
| **Rainfall(mm)** | **5** | **30** | **50** | **30** | **50** | **Light to moderate rainfall at isolated places,** |
| **Max. T (°C)** | **38** | **38** | **37** | **36** | **36** | **-** |
| **Mini. T (°C)** | **28** | **28** | **27** | **26** | **26** |
| **Cloud cover (okta)** | **3** | **7** | **7** | **7** | **7** | **Partially cloudy sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **75** | **75** | **70** | **70** | **70** |  |
| **Wind speed (kmph)** | **5** | **5** | **10** | **10** | **10** |  |
| **Wind direction(deg)** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** | **Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
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| Livestock | **-** | Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Hygiene should be maintained at the place where animals are kept. |

**(A. Sattar)**

**(Nodal Officer)**