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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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

 **(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

 **(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

 **(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(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. 3****Date:Tuesday,8th January, 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 22.7°C and 8.0°C, respectively. Average relative humidity was 84 percent at 0700 hrs. and 52 percent at 1400 hrs. Soil temperature at 5 cm depth was 11.3°C at 0700 hrs. and 20.6°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 1.9km/hr, 5.1hours and 1.3mm, respectively. During the previous forecasting period, cloudy sky condition and drizzle at isolated places on 7th January was observed. On the rest another days, dry weather prevailed. Early morning fog was also observed.

**Medium Range Weather Forecast**

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

**(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
* Spraying of mixture of Sulfosulfuron@33 gm and Metsulfuron @20 gm in 500 liters of water per hectare is advised in wheat crop, which is in 30-35 days stage in order to protect the crop from infestation of weeds. ***Precaution:-****Never use these herbicides if mustard, sunflower, pea or any other broad leaved crops are intercropped with wheat.*
 |
| Maize | Vegetative | Farmers are advised to give irrigation in 50-55 days old maize crop. Application of 50 kg nitrogen per hectare is also advised. |
| Pea | Fruiting | * Spraying of 2 % urea is advised for proper growth of pods in pea crop.
* Regular monitoring is advised against infestation of powdery mildew disease in early sown pea crop. Farmers are advised to spray Karathane @ 1 ml per litre of water or Sulfex @ 3gm per litre of water, if disease infestation is observed.
 |
| Tomato | Fruiting | Monitoring is advised for infestation of fruit borer in tomato. This is a very harmful insect pest, which damages the tomato crop. The larvae scrap the tomato foliage in the early stage and later bore into the fruits making it unfit for marketing. Growing of african marigold as trap crop, use of pheromone traps (4 traps /acre), setting of light traps and bird perches @10 / acre are advised. As biological management, spraying of *Beauveria bassiana* @1 gram /liter of water is advised. In severe cases of infestation, spraying of Indoxacarb14.5SC@1ml/2.5 liters of water or Spinosad 48EC@1ml/4 liters of water is advised. |
| *Rabi* onion | Transplanting | * Transplanting should be done in small beds with a size of 3x2 m or 5x2 m and with a spacing of 15 cm line to line and 10 cm plant to plant.
* Weeding is advised in 20-25 days old transplanted onion crop. Give light irrigation at short intervals.
 |
| Garlic | Vegetative | Weeding is advised in garlic crop. Give irrigation as per status of soil moisture. Protect the crop against attack of insect-pest and disease. |
| Potato | Vegetative | Weeding is advised in late sown potato crop. Give irrigation at an interval of 10-15 days. Regular monitoring is also advised for infestation of insect-pest and diseases specially blight. |
| Pigeon Pea | Flowering | Monitoring is advised for infestation of pod borer insects in pigeon pea crop, which is in flowering stage. If pest infestation is found, spraying of Cartap hydrochloride @ 1.5ml/L of water is advised. |
| Animal care | - | Special care should be given to milch animal. Farmers are advised to give 50 gram salt and 50-100 gm mineral mixture supplicated with feeds prepared from grains, and green & dry hay to keep them healthy and strong.  |

**(A. Sattar)**

**(Nodal Officer)**

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| **Bulletin No. 3****Date:Tuesday,8th January, 2019** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  |

**Weather during the previous forecast period**

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**Medium Range Weather Forecast**

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

**(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **9****January** | **10****January** | **11****January** | **12****January** | **13****January** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **21** | **22** | **22** | **23** | **23** | **-** |
| **Mini. T (°C)** | **11** | **10** | **10** | **10** | **9** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Clear sky** |
| **Max Relative Humidity (%)** | **95** | **95** | **95** | **95** | **95** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **45** | **50** | **45** |  |
| **Wind speed (kmph)** | **5** | **5** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly**  | **Easterly** | **Easterly** | **Easterly** | **Westerly** | **Easterly/Westerly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
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| Wheat | Tillering | * Farmers are advised to give 2nd irrigation in the crop, which is in 45-50 days stage. Farmers are advised to give irrigation in late sown wheat crop, which is in 21-25 days (Crown Root Initiation) stage. Application of 30 kg nitrogen per hectare is also advised after irrigation.
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**(A. Sattar)**

**(Nodal Officer)**