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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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

**(Begusarai)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **2** | **2** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **40** | **40** | **40** | **40** | **40** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Darbhanga)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(East Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Gopalganj)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **27** | **27** | **27** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
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| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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** |
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**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Madhubani)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **50** | **50** | **50** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Muzaffarpur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Samastipur)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Saran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Shivhar)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Sitamarhi)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **15** | **15** | **15** | **15** | **15** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Siwan)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **29** | **28** | **28** | **27** | **27** | **-** |
| **Mini. T (°C)** | **14** | **15** | **15** | **15** | **15** |
| **Cloud cover (okta)** | **0** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **5** | **5** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(Vaishali)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **27** | **28** | **28** | **-** |
| **Mini. T (°C)** | **15** | **15** | **15** | **15** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **85** | **85** | **85** | **85** | **85** |  |
| **Min Relative Humidity (%)** | **45** | **45** | **45** | **45** | **45** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. 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. 84****Date: Thursday, 22nd November, 2018** | **F:\15349550_1863725520538190_1704492238980604982_n.jpg** |  **Phone No : 06274-240266** |

**Weather during the previous forecast period**

According to meteorological data recorded at Agro meteorological Observatory, Pusa (Bihar), average maximum and minimum temperature were 27.3°C and 11.4°C respectively. Average relative humidity was 84 percent at 0700 hrs. and 53 percent at 1400 hrs. Soil temperature at 5 cm depth was 15.7°C at 0700 hrs. and 25.7°C at 1400 hrs. Average wind speed, daily sunshine hours and average daily evaporation were 2.3 km/hr, 7.7hours and 1.9mm respectively. No rainfall was recorded during this period.

**Medium Range Weather Forecast**

**(23-27 November, 2018)**

 **(West Champaran)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Weather parameters** | **23****November** | **24****November** | **25****November** | **26****November** | **27****November** | **Remarks** |
| **Rainfall(mm)** | **0** | **0** | **0** | **0** | **0** | **Dry weather** |
| **Max. T (°C)** | **28** | **28** | **28** | **28** | **28** | **-** |
| **Mini. T (°C)** | **14** | **14** | **14** | **14** | **15** |
| **Cloud cover (okta)** | **2** | **0** | **0** | **0** | **0** | **Mainly clear sky** |
| **Max Relative Humidity (%)** | **90** | **90** | **90** | **90** | **90** |  |
| **Min Relative Humidity (%)** | **50** | **50** | **50** | **50** | **50** |  |
| **Wind speed (kmph)** | **10** | **10** | **10** | **10** | **5** |  |
| **Wind direction(deg)** | **Westerly** | **Westerly** | **Westerly** | **Easterly** | **Easterly** | **Westerly/ Easterly** |

**Advisory for the farmers**

|  |  |  |
| --- | --- | --- |
| **Crop** | **Phenophases** | **Advisory (Based on weather forecast)** |
| Potato | Planting | Complete the planting of Potato at the earliest. *Kufri jyoti, Kufri ashoka, Kufri chandramukhi, Kufri badhsha, Kufri lalima,Kufri sinduri, Kufri arun, Kufri anand,Kufri pusker, Rajendraalu 1, Rajendraalu 2 and Rajendraalu 3*, varieties of potato are recommended for planting in north Bihar region. Seed rate@20-25q/ha and planting distance of 50-60cm X15-20cm is advised. Application of 20-25 ton FYM/ha, 75 kg nitrogen, 90 kg phosphorus and 100kg potash is advised during land preparation. Seed treatment with Emission-6@0.5% or Di-Ethane M-45@0.2% is advised for 10 minutes before planting. Planting of whole tuber (20-40 grams) is advised. |
| Wheat | Sowing | Farmers are advised to give priority in sowing of wheat crop. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824,HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition. Application of 15-20 ton FYM manures, 60 kg nitrogen, 60 kg phosphorus and 40 kg potash per hectare is advised before sowing. Seeds should be treated with Carbendazim @ 2.0 g per kilogram of seed. For broadcasting method, seed rate @ 125kg per hectare is advised and 100 kg per hectare is recommended for seed drill method. Deep sowing of seeds is not advisable. |
| Gram | Sowing | Present weather is suitable for sowing of gram. *Pusa-256, KPG-59(Udai),KWR-108,pant G-186 and Pusa-372* varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0gm/kg. To protect against *kajra caterpillar (cut worm)*, seeds should be treated with chlorpyrifos@8ml/kg. Before sowing, treated seeds should be mixed with rhizobium culture (5 packets/hectare) also. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare is advisedbefore sowing. Seed rate@75-80 kg/ha for small size grains and 100 kg/hectare for large size grains with planting distance of 30cm X 10cm is advised.  |
| *Rai* | Sowing/weeding | Complete the sowing of late variety of *rai* such as *Rajendrarai picheti (RAURD-9403), Rajendr aanukul (RAURD-1002) and Rajendra suflam (RAURDL-02-01)* till the end of November. Weeding is advised in 20-25 days old *rai* crop. Plant to plant spacing should be maintained at 12-15 cm by thinning. |
| *Rabi* Maize | Sowing | Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasankermakkadeepjwala* varieties of hybrid maize and Deoki *white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in north Bihar. Seed rate@ 20kg/ha is advised. Seeds should be treated with Thiram @2.5g /kg of seed.  |
| Vegetables, garlic and onion nursery | - | Weeding is advised. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised. |
| Maize, pea, lentil and kidney beans and other crops | Seedling stage | Monitoring of cutworm is advised in 15-20 days old maize, pea, lentil and kidney beans crop. They cut the seedlings at the ground level. The caterpillar destroys more number of plants than what they are capable of eating. For management, flooding the field helps in bringing the caterpillars out of cracks when they are picked up by birds. In severe damages, spraying of the crop with chlorpyriphos 20 EC @ 2.5 ml per liter of water is advised. |
| Animal care | - | Low temperature may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep animal in open at night. Hygiene should be maintained at the place where animals are kept. |

**(A. Sattar)**

**(Nodal Officer)**