



BAU

GRAMIN KRISHI MAUSAM SEWA
ZONAL RESEARCH STATION(BIRSA AGRICULTURAL UNIVERSITY), DUMKA, JHARKHAND
 (www.bauranchi.org /www.bau-eagriculture.com)



IMD

Agromet Advisory Bulletin for District-Dumka
 (amfudumka@gmail.com)

Ref: 55/ AAS/ZRS,Dumka, Jharkhand

Dated: 09.11.2018

Indian Meteorological Department Forecast Data

Weather parameters	Date				
	14 November	15 November	16 November	17 November	18 November
Rainfall(mm)	0	0	0	0	0
Maximum temperature(°C)	30	30	30	30	29
Minimum temperature(°C)	17	18	17	17	16
Total cloud cover(okta)	Scattered Cloud	Scattered Cloud	Clear Sky	Clear Sky	Clear Sky
Maximum Relative humidity(%)	57	51	48	49	48
Minimum Relative humidity(%)	36	31	25	28	26
Wind Speed(kmph)	0	4	4	2	4
Wind Direction(degree)	S-ly	W-ly	W-ly	NW-ly	NE-ly

Crop stage

Crop	Stage	Crop	Stage
Rice	Harvesting	Cucurbitaceae	Harvesting stage
Gram,Lentil,linseed,Toria,Rye ,Yellow Mustard and Field Pea	Vegetative	Bhindi and cowpea	Harvesting stage
Til , Urd and Ground nut	Harvesting	Ginger ,Turmaric and Elephant foot yam	Maturity Stage
Tomato, Brinjal,Cabbage and Culiflower	Transplanting to Harvesting	Horse gram and Pigeon pea	Flowering
Niger	Vegetative to flowering stage	Potato ,Onion and Table Pea .	Sowing to vegetative
Papaya	Transplanting to Vegetative	Wheat	Land preparation and sowing

Agricultural suggestion based on weather- According to five days forecast sky will be clear to scattered cloud and slightly decrease in temperature. Farmers are advise to plough the field and sowing of rabi crops. Cultivate early varieties of rabi crops and as per availability of irrigation water and water requirement of crops.If farmers have 3 to 5 irrigation cultivate Wheat,Brinjal, Cabbage , Culiflower , Yellow Mustard, Potato and Green Pea and 2 to 3 irrigation to cultivate Lentil, Linseed and Gram.

Rice	1) Late varieties of rice crop are at daugh to maturity stage, if panicle are affected with false smut disease , before harvesting pick black earhead and destroy them after burning. After threshing, dry the grains and store when moisture level is 8-10 %.Before storage of grain clean storage room , boil the gunny bag , spray One part of malathian 50Ec with 300 part of water in storage room .After drying of bag and room ,fill the bags with grain and keep it on wood or polythene sheet and also keep distance from roof and wall .
Wheat	Arrange seed-1)For timely sowing In irrigated condition cultivate improved varieties of wheat – HUW-468, DBW-39, K-9107,K-1006 ,K307, Birsa Genhu – 3,HD-2967,and HD-2733. 2) For timely sowing in unirrigated condition cultivate improved varieties of wheat – C- 306 ,K -8027,HDR-77,K-8962,HD-2643(Ganga). After land preparation ,open the furrow at the distance 18 to 20 cm(row to row) and apply 100 qt FYM, half dose of urea @ 43 kg and full dose of Single Super phosphate @ 125 kg , Murate of potash@ 20 kg and 50 kg seed per acre .Before sowing , seed should be treated with Bavistin @ 2 g per kg seed and after 6 hour interval treat the seed with insecticide chlorpiriphos @ 5 ml/kg seed .
Pigeon pea	When flowering is up to 50%, alternate three spraying of Endoxacarb or Spinosad or Dhawan gold @ 1.5 to 2 ml / liter of water and after in 15 days apply Monocrotophos @ 2 ml /lt water solution to prevent from pod borer.
Cowpea and Horse gram	To control Hairy Caterpillars collect and destroy the egg and young larvae.The young Caterpillars is control by dusting 2% Methylparathion dust @ 25-30 kg ha ⁻¹ .For full grown Caterpillars spray Quinalphas 25 EC 1.5 litre/500 litre of water solution. To control thrips spray Trizophos or Dichlorvos @ 1.5 litre ha ⁻¹ at the time of flowering .To prevent from white fly collect affected yellowish leaves and plant ,buried it in soil and spraying of Metasistox @ 1.5ml /litre or Dicure @ 5 ml/liter of water solution.
Rye and Yellow Mustard	Farmers are advised to prepare land for sowing of Rye varieties- Shivani, Pusa bold, NRCHB 101 and Pusa Mustard 25 and Yellow Mustard improved varieties- NRCYS 05-02 . After land preparation apply half dose of urea 35 kg, full dose of single super phosphate 150 kg, murate of potash 27 kg ,phosphogypsum 53 kg seed rate 2 kg / acre by maintaining row to row distance at 30 cm and planting distance at 10 cm.
Gram	Improved varieties- KAK-2, Birsa Channa-3, HK94-134(Kabuli with seed rate 34 kg/acre) and KPG-59, Pusa -372, KWR- 108, (Desi with seed rate 28 kg/acre) should be sown as single crop or intercropping with linseed or mustard. Before sowing treat the seed with Bavistin & Thiram in the ratio of 1 : 2 g/kg of seed and dry it in shed for 2-3 hr then treat it with rhizobium culture or PSB @ 20g /kg seed and after 3-4 hr sowing should be done by opening the furrow row to row 30 cm and plant to plant 10 cm and application of urea 22 kg, single super phosphate 125 kg, murate of potash 17 kg ,phosphogypsum 53 kg per acre.
Lentil	Cultivate improved varieties of Lentil – H.U.L-57,W.B.L-77, and K.L.S-218 etc. For sowing open the furrow apply D.A.P.@40 kg, murate of potash @14 kg, Phosphogypsum@ 50 kg with seed rate 12 kg and for bold varieties seed rate 20 kg / acre by maintaining row to row distance at 25 cm and planting distance at 5 cm. Before sowing treat the seed with Bavistin & Thiram in the ratio of 1: 2 g/kg of seed (Bavistin @ 1g & Thiram @ 2).
Linseed	Sowing of improved early varieties-Divya,Shekar(in irrigated condition)and Priyam,T-397 (in unirrigated condition) with seed rate 8-10kg/acre and row to row 30 cm. Avoid regular sowing 2-3 year of linseed in same plot to control disease .
Tomato, Cabbage, Culiflower	Cultivate -1)Tomato improved varieties – Swarna Sampda ,Pusa hybrid-1,Swarn samridhi,Surakcha(Hybrid) and Swarn Lalima,Arka abha, BT-12 2) Cabbage improved varieties - Golden Acre , Pride of India, Early Drum Head 3) Culiflower improved varieties - Pusa Depali ,Kuvari , Early sythetic,Pusa Ketki. 4) Before sowing seeds should be treated with carbendazime@2g or trichoderma @5g per kg of seed and sown inside net shed with raised seed bed . 5)Prepare the land with four ploughing and apply FYM @ 250 quantal, half dose of urea @ 130 kg and SSP @ 375 kg and MOP@ 100 kg per hectare and transplant 8 to 10 days old seedling ,and planting distance 60 cm.
Table Pea	Cultivate improved variety of Pea Arkel (Early), Pusa pragaty, PM-113, Kashi Nandani,Azad pea-1 etc. and take seed 40 kg per per acre, well rooted FYM @ 10 tons,Urea @30 kg, SSP @ 200 Kg and MoP @ 26 kg/acre . For sowing open the furrow at the distance of 30 -45cm (between row) and maintain plant to plant distance 10 cm and before sowing treat the seed with captain or thiram @ 2g/ kg seed and at last with rhizobium culture .
Potato	Sowing of improved varieties-, Kufri Ashoka,Kufri Puhkraj(Early varieties), Kufri Pushkar ,Kufri Kanchan and Kufri Lalima (medium varieties)and Kufri Sinduri and Kufri Chiepsona-1 (late varieties). Apply FYM @40 tons ha ⁻¹ before last ploughing and level the land. The seed tubers should be washed in water and then treated with Carbendazim or Mancozeb or Redomil MZ @ 1.5-2 g / litre of water solution.Take tubers having 25-30 g weight and 25-30 quintals of seed for one hectare land .For sowing Open the furrow, maintain distance between rows 50 cm and between plants 15-20 cm. Apply half dose of Nitrogen 75 kg, full dose of Phosphorus100 kg, full dose of Potash 120 kg and 24 kg Sulphur/hectare. In vegetative stage if leaf curling is seen ,to control this spraying of caldan 50 SP @ 1 g /lt of water. In 25 to 30 days standing crop ,weeding and inter culturing operation should be done by applying rest dose of Urea@162 kg/hectare.
Onion	Raise improved varieties seedling-Pusa red,Pusa ratnar,N-53,Arka nikatan,Arka kalyan,Agrifound dark red, Pusa white,Pusa madhavi, Bombay slection, Patna white and Bellary red . Prepare nursery bed with well rotted FYM .Soak the seed in water for an 8-10 hr treat it with fungicide carbendazim @ 2gm/kg and after sowing mulching with rice straw to maintain temperature for quick germination.
Papaya	To prevent from Ring spot virus and Papaya Mosaic, transplant it in the month of October –November with improved varieties – Pusa dwarf,Pusa majesty,Pusa Giant and Honney Dew etc . Pit Size 60 x 60 x 60 cm with planting distance plant to plant 1.8 meter. Per pit Compost dose@7 kg, Karanj or Neem cake @ 1 kg, Fertilizer- DAP @ 1.5 Kg, MOP@ ½ Kg and methyl Parathion dust 50g.
Cow and Bufflow	Weather is favourable for Foot and Mouth Disease Farmer are advice to vaccinate FMD vaccine to their cattle with the consultant of veterinary doctor.
Fodder	To increase the milk production, cultivate oat (improved variety Kent,UPO812,OS-6) with seed rate 40 kg/acre ..Apply recommended dose of fertilizer , Urea @ 86 kg, SSP @ 100 Kg and MoP @ 13 kg/acre and maintain row to row distance 20 cm.

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 (Nodal Officer)
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Minimum temperature(°C)	17	17	16	15	15
Total cloud cover(okta)	Scattered Cloud	Clear Sky	Clear Sky	Clear Sky	Clear Sky
Maximum Relative humidity(%)	56	49	45	48	44
Minimum Relative humidity(%)	32	29	22	26	23
Wind Speed(kmph)	0	5	5	4	3
Wind Direction(degree)	S-ly	NW-ly	W-ly	NW-ly	E-ly

Crop stage

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Table with 6 columns: Weather parameters, 14 November, 15 November, 16 November, 17 November, 18 November. Rows include Rainfall, Maximum/Minimum temperature, Total cloud cover, Maximum/Minimum Relative humidity, Wind Speed, and Wind Direction.

Crop stage

Table with 4 columns: Crop, Stage, Crop, Stage. Rows include Rice, Gram, Lentil, Tili, Urd and Ground nut, Tomato, Brinjal, Cabbage and Culiflower, Niger, and Papaya.

Agricultural suggestion based on weather- According to five days forecast sky will be clear to scattered cloud and slightly decrease in temperature. Farmers are advise to plough the field and sowing of rabi crops. Cultivate early varieties of rabi crops and as per availability of irrigation water and water requirement of crops.

Main advisory table with 2 columns: Crop and Suggestion. Rows include Rice, Wheat, Pigeon pea, Cowpea and Horse gram, Rye and Yellow Mustard, Gram, Lentil, Linseed, Tomato, Cabbage, Culiflower, Table Pea, Potato, Onion, Papaya, Cow and Bufflow, and Fodder.

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Maximum Relative humidity(%)	57	51	47	54	49
Minimum Relative humidity(%)	29	27	23	24	24
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Wind Direction(degree)	SW-ly	W-ly	W-ly	W-ly	W-ly

Crop stage

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Table Pea	Cultivate improved variety of Pea Arkel (Early), Pusa pragaty, PM-113, Kashi Nandani,Azad pea-1 etc. and take seed 40 kg for per acre, well rooted FYM @ 10 tons,Urea @30 kg, SSP @ 200 Kg and MoP @ 26 kg/acre . For sowing open the furrow at the distance of 30 -45cm (between row) and maintain plant to plant distance 10 cm and before sowing treat the seed with captain or thiram @ 2g/ kg seed and at last with rhizobium culture .
Potato	Sowing of improved varieties-, Kufri Ashoka,Kufri Puhkraj(Early varieties), Kufri Pushkar ,Kufri Kanchan and Kufri Lalima (medium varieties)and Kufri Sinduri and Kufri Chiepsona-1 (late varieties). Apply FYM @40 tons ha ⁻¹ before last ploughing and level the land. The seed tubers should be washed in water and then treated with Carbendazim or Mancozeb or Redomil MZ @ 1.5-2 g / litre of water solution.Take tubers having 25-30 g weight and 25-30 quintals of seed for one hectare land .For sowing Open the furrow, maintain distance between rows 50 cm and between plants 15-20 cm. Apply half dose of Nitrogen 75 kg, full dose of Phosphorus100 kg, full dose of Potash 120 kg and 24 kg Sulphur/hectare. In vegetative stage if leaf curling is seen ,to control this spraying of caldan 50 SP @ 1 g /lt of water. In 25 to 30 days standing crop ,weeding and inter culturing operation should be done by applying rest dose of Urea@162 kg/hectare.
Onion	Raise improved varieties seedling-Pusa red,Pusa ratnar,N-53,Arka nikatan,Arka kalyan,Agrifound dark red, Pusa white,Pusa madhavi, Bombay slection, Patna white and Bellary red . Prepare nursery bed with well rotted FYM .Soak the seed in water for an 8-10 hr treat it with fungicide carbendazim @ 2gm/kg and after sowing mulching with rice straw to maintain temperature for quick germination.
Papaya	To prevent from Ring spot virus and Papaya Mosaic, transplant it in the month of October –November with improved varieties – Pusa dwarf,Pusa majesty,Pusa Giant and Honney Dew etc . Pit Size 60 x 60 x 60 cm with planting distance plant to plant 1.8 meter. Per pit Compost dose@7 kg, Karanj or Neem cake @ 1 kg, Fertilizer- DAP @ 1.5 Kg, MOP@ ½ Kg and methyl Parathion dust 50g.
Cow and Bufflow	Weather is favourable for Foot and Mouth Disease Farmer are advice to vaccinate FMD vaccine to their cattle with the consultant of veterinary doctor.
Fodder	To increase the milk production, cultivate oat (improved variety Kent,UPO812,OS-6) with seed rate 40 kg/acre ..Apply recommended dose of fertilizer , Urea @ 86 kg, SSP @ 100 Kg and MoP @ 13 kg/acre and maintain row to row distance 20 cm.

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IMD

Ref: 55/ AAS/ZRS,Dumka, Jharkhand

Dated: 09.11.2018

Indian Meteorological Department Forecast Data

Weather parameters	Date				
	14 November	15 November	16 November	17 November	18 November
Rainfall(mm)	0	0	0	0	0
Maximum temperature(°C)	30	30	30	30	29
Minimum temperature(°C)	17	17	16	15	15
Total cloud cover(okta)	Scattered Cloud	Clear Sky	Clear Sky	Clear Sky	Clear Sky
Maximum Relative humidity(%)	56	49	45	48	44
Minimum Relative humidity(%)	32	29	22	26	23
Wind Speed(kmph)	0	5	5	4	3
Wind Direction(degree)	S-ly	W-ly	NW-ly	NW-ly	E-ly

Crop stage

Crop	Stage	Crop	Stage
Rice	Harvesting	Cucurbitaceae	Harvesting stage
Gram,Lentil,linseed,Toria,Rye , Yellow Mustard and Field Pea	Vegetative	Bhindi and cowpea	Harvesting stage
Til , Urd and Ground nut	Harvesting	Ginger ,Turmaric and Elephant foot yam	Maturity Stage
Tomato, Brinjal,Cabbage and Culiflower	Transplanting to Harvesting	Horse gram and Pigeon pea	Flowering
Niger	Vegetative to flowering stage	Potato ,Onion and Table Pea .	Sowing to vegetative
Papaya	Transplanting to Vegetative	Wheat	Land preparation and sowing

Agricultural suggestion based on weather- According to five days forecast sky will be clear to scattered cloud and slightly decrease in temperature. Farmers are advise to plough the field and sowing of rabi crops. Cultivate early varieties of rabi crops and as per availability of irrigation water and water requirement of crops.If farmers have 3 to 5 irrigation cultivate Wheat,Brinjal, Cabbage , Culiflower , Yellow Mustard, Potato and Green Pea and 2 to 3 irrigation to cultivate Lentil, Linseed and Gram.

Rice	1) Late varieties of rice crop are at daugh to maturity stage, if panicle are affected with false smut disease , before harvesting pick black earhead and destroy them after burning. After threshing, dry the grains and store when moisture level is 8-10 %.Before storage of grain clean storage room , boil the gunny bag , spray One part of malathian 50Ec with 300 part of water in storage room .After drying of bag and room ,fill the bags with grain and keep it on wood or polythene sheet and also keep distance from roof and wall .
Wheat	Arrange seed-1)For timely sowing In irrigated condition cultivate improved varieties of wheat – HUW-468, DBW-39, K-9107,K-1006 ,K307, Birsa Genhu – 3,HD-2967,and HD-2733. 2) For timely sowing in unirrigated condition cultivate improved varieties of wheat – C- 306 ,K -8027,HDR-77,K-8962,HD-2643(Ganga). After land preparation ,open the furrow at the distance 18 to 20 cm(row to row) and apply 100 qt FYM, half dose of urea @ 43 kg and full dose of Single Super phosphate @ 125 kg , Murate of potash@ 20 kg and 50 kg seed per acre .Before sowing , seed should be treated with Bavistin @ 2 g per kg seed and after 6 hour interval treat the seed with insecticide chlorpiriphos @ 5 ml/kg seed .
Pigeon pea	When flowering is up to 50%, alternate three spraying of Endoxacarb or Spinosad or Dhawan gold @ 1.5 to 2 ml / liter of water and after in 15 daysapply Monocrotophos @ 2 ml /lt water solution to prevent from pod borer.
Cowpea and Horse gram	To control Hairy Caterpillars collect and destroy the egg and young larvae.The young Caterpillars is control by dusting 2% Methylparathion dust @ 25-30 kg ha ⁻¹ .For full grown Caterpillars spray Quinalphas 25 EC 1.5 litre/500 litre of water solution. To control thrips spray Trizophos or Dichlorvos @ 1.5 litre ha ⁻¹ at the time of flowering .To prevent from white fly collect affected yellowish leaves and plant ,buried it in soil and spraying of Metasistox @ 1.5ml /litre or Dicure @ 5 ml/liter of water solution.
Rye and Yellow Mustard	Farmers are advised to prepare land for sowing of Rye varieties- Shivani, Pusa bold, NRCHB 101 and Pusa Mustard 25 and Yellow Mustard improved varieties- NRCYS 05-02 . After land preparation apply half dose of urea 35 kg, full dose of single super phosphate 150 kg, murate of potash 27 kg ,phosphogypsum 53 kg seed rate 2 kg / acre by maintaining row to row distance at 30 cm and planting distance at 10 cm.
Gram	Improved varieties- KAK-2, Birsa Channa-3, HK94-134(Kabuli with seed rate 34 kg/acre) and KPG-59, Pusa -372, KWR- 108, (Desi with seed rate 28 kg/acre) should be sown as single crop or intercropping with linseed or mustard. Before sowing treat the seed with Bavistin & Thiram in the ratio of 1 : 2 g/kg of seed and dry it in shed for 2-3 hr then treat it with rhizobium culture or PSB @ 20g /kg seed and after 3-4 hr sowing should be done by opening the furrow row to row 30 cm and plant to plant 10 cm and application of urea 22 kg, single super phosphate 125 kg, murate of potash 17 kg ,phosphogypsum 53 kg per acre.
Lentil	Cultivate improved varieties of Lentil – H.U.L-57,W.B.L-77, and K.L.S-218 etc. For sowing open the furrow apply D.A.P.@40 kg, murate of potash @14 kg, Phosphogypsum@ 50 kg with seed rate 12 kg and for bold varieties seed rate 20 kg / acre by maintaining row to row distance at 25 cm and planting distance at 5 cm. Before sowing treat the seed with Bavistin & Thiram in the ratio of 1: 2 g/kg of seed (Bavistin @ 1g & Thiram @ 2).
Linseed	Sowing of improved early varieties-Divya,Shekar(in irrigated condition)and Priyam,T-397 (in unirrigated condition) with seed rate 8-10kg/acre and row to row 30 cm. Avoid regular sowing 2-3 year of linseed in same plot to control disease .
Tomato, Cabbage, Culiflower	Cultivate -1)Tomato improved varieties – Swarna Sampda ,Pusa hybrid-1,Swarn samridhi,Surakcha(Hybrid) and Swarn Lalima,Arka abha, BT-12 2) Cabbage improved varieties - Golden Acre , Pride of India, Early Drum Head 3) Culiflower improved varieties - Pusa Depali ,Kuvari , Early sythetic,Pusa Ketki. 4) Before sowing seeds should be treated with carbendazime@2g or trichoderma @5g per kg of seed and sown inside net shed with raised seed bed . 5)Prepare the land with four ploughing and apply FYM @ 250 quantal, half dose of urea @ 130 kg and SSP @ 375 kg and MOP@ 100 kg per hectare and transplant 8 to 10 days old seedling ,and planting distance 60 cm.
Table Pea	Cultivate improved variety of Pea Arkel (Early), Pusa pragaty, PM-113, Kashi Nandani,Azad pea-1 etc. and take seed 40 kg for per acre, well rooted FYM @ 10 tons,Urea @30 kg, SSP @ 200 Kg and MoP @ 26 kg/acre . For sowing open the furrow at the distance of 30 -45cm (between row) and maintain plant to plant distance 10 cm and before sowing treat the seed with captain or thiram @ 2g/ kg seed and at last with rhizobium culture .
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Papaya	To prevent from Ring spot virus and Papaya Mosaic, transplant it in the month of October –November with improved varieties – Pusa dwarf,Pusa majesty,Pusa Giant and Honney Dew etc . Pit Size 60 x 60 x 60 cm with planting distance plant to plant 1.8 meter. Per pit Compost dose@7 kg, Karanj or Neem cake @ 1 kg, Fertilizer- DAP @ 1.5 Kg, MOP@ ½ Kg and methyl Parathion dust 50g.
Cow and Bufflow	Weather is favourable for Foot and Mouth Disease Farmer are advice to vaccinate FMD vaccine to their cattle with the consultant of veterinary doctor.
Fodder	To increase the milk production, cultivate oat (improved variety Kent,UPO812,OS-6) with seed rate 40 kg/acre ..Apply recommended dose of fertilizer , Urea @ 86 kg, SSP @ 100 Kg and MoP @ 13 kg/acre and maintain row to row distance 20 cm.

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IMD

Ref: 55/ AAS/ZRS,Dumka, Jharkhand

Dated: 09.11.2018

Indian Meteorological Department Forecast Data

Table with 6 columns: Weather parameters, 14 November, 15 November, 16 November, 17 November, 18 November. Rows include Rainfall, Maximum/Minimum temperature, Total cloud cover, Maximum/Minimum Relative humidity, Wind Speed, and Wind Direction.

Crop stage

Table with 4 columns: Crop, Stage, Crop, Stage. Rows include Rice, Gram, Lentil, Tili, Urd and Ground nut, Tomato, Brinjal, Cabbage and Culiflower, Niger, and Papaya.

Agricultural suggestion based on weather- According to five days forecast sky will be clear to scattered cloud and slightly decrease in temperature. Farmers are advise to plough the field and sowing of rabi crops. Cultivate early varieties of rabi crops and as per availability of irrigation water and water requirement of crops.

Main advisory table with 2 columns: Crop and detailed agricultural suggestions. Rows include Rice, Wheat, Pigeon pea, Cowpea and Horse gram, Rye and Yellow Mustard, Gram, Lentil, Linseed, Tomato, Cabbage, Culiflower, Table Pea, Potato, Onion, Papaya, Cow and Bufflow, and Fodder.

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IMD

Ref: 55/ AAS/ZRS,Dumka, Jharkhand

Dated: 09.11.2018

Indian Meteorological Department Forecast Data

Weather parameters	Date				
	14 November	15 November	16 November	17 November	18 November
Rainfall(mm)	0	0	0	0	0
Maximum temperature(°C)	30	30	30	30	29
Minimum temperature(°C)	17	18	17	17	16
Total cloud cover(okta)	Scattered Cloud	Scattered Cloud	Clear Sky	Clear Sky	Clear Sky
Maximum Relative humidity(%)	57	51	48	49	48
Minimum Relative humidity(%)	36	31	25	28	26
Wind Speed(kmph)	0	4	4	2	4
Wind Direction(degree)	S-ly	W-ly	W-ly	NW-ly	NE-ly

Crop stage

Crop	Stage	Crop	Stage
Rice	Harvesting	Cucurbitaceae	Harvesting stage
Gram,Lentil,linseed,Toria,Rye ,Yellow Mustard and Field Pea	Vegetative	Bhindi and cowpea	Harvesting stage
Til , Urd and Ground nut	Harvesting	Ginger ,Turmaric and Elephant foot yam	Maturity Stage
Tomato, Brinjal,Cabbage and Culiflower	Transplanting to Harvesting	Horse gram and Pigeon pea	Flowering
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Papaya	Transplanting to Vegetative	Wheat	Land preparation and sowing

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Rice	1) Late varieties of rice crop are at daugh to maturity stage, if panicle are affected with false smut disease , before harvesting pick black earhead and destroy them after burning. After threshing, dry the grains and store when moisture level is 8-10 %.Before storage of grain clean storage room , boil the gunny bag , spray One part of malathian 50Ec with 300 part of water in storage room .After drying of bag and room ,fill the bags with grain and keep it on wood or polythene sheet and also keep distance from roof and wall .
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Pigeon pea	When flowering is up to 50%, alternate three spraying of Endoxacarb or Spinosad or Dhawan gold @ 1.5 to 2 ml / liter of water and after in 15 daysapply Monocrotophos @ 2 ml /lt water solution to prevent from pod borer.
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IMD

Ref: 55/ AAS/ZRS,Dumka, Jharkhand

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Indian Meteorological Department Forecast Data

Table with 6 columns: Weather parameters, 14 November, 15 November, 16 November, 17 November, 18 November. Rows include Rainfall, Maximum/Minimum temperature, Total cloud cover, Maximum/Minimum Relative humidity, Wind Speed, and Wind Direction.

Crop stage

Table with 4 columns: Crop, Stage, Crop, Stage. Rows include Rice, Gram/Lentil/linseed/Toria/Rye, Til, Urd and Ground nut, Tomato, Brinjal, Cabbage and Culiflower, Niger, and Papaya.

Agricultural suggestion based on weather- According to five days forecast sky will be clear to scattered cloud and slightly decrease in temperature. Farmers are advise to plough the field and sowing of rabi crops. Cultivate early varieties of rabi crops and as per availability of irrigation water and water requirement of crops.

Large table with 2 columns: Crop, Suggestion. Rows include Rice, Wheat, Pigeon pea, Cowpea and Horse gram, Rye and Yellow Mustard, Gram, Lentil, Linseed, Tomato, Cabbage, Culiflower, Table Pea, Potato, Onion, Papaya, Cow and Bufflow, and Fodder.

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Ref: 55/ AAS/ZRS,Dumka, Jharkhand

Dated: 09.11.2018

Indian Meteorological Department Forecast Data

Table with columns: Weather parameters, Date (14 November, 15 November, 16 November, 17 November, 18 November). Rows include Rainfall, Maximum/Minimum temperature, Total cloud cover, Maximum/Minimum Relative humidity, Wind Speed, and Wind Direction.

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(ZONAL RESEARCH STATION, DARISAI)



India Meteorological Department, Meteorological centre Ranchi receive forecast data from Ministry of Earth Science New Delhi Government of India for Zonal Research Station Darisai under Birsa Agricultural University for the next 120 hours

Agromet Advisory Service Bulletin for

East Singhbhum

(14-18 Nov 2018)

Ref : 13/2018/GKMS/Darisai(92)
Date: 13.11.2018
Web : bauranchi.org

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Forecast data for the following 5 days received from IMD

Date	14 Nov 2018	15 Nov 2018	16 Nov 2018	17 Nov 2018	18 Nov 2018
Weather indices					
Rainfall(mm)	0 mm	0 mm	0 mm	0 mm	0 mm
Maximum Temperature (°C)	31	31	31	31	31
Minimum Temperature (°C)	18	17	17	16	16
Total Cloud cover Cloud (okta)	Intermittent Clouds	Mostly Cloudy	Mainly Clear	Mainly Clear	Mainly Clear
Maximum Relative Humidity (%)	89	85	89	89	88
Minimum Relative Humidity (%)	36	31	28	30	27
Wind speed (km/hr)(t)	4	7	7	5	5
Wind direction	WN-ly	W-ly	W-ly	W-ly	SE-ly

Agricultural suggestion based on weather forecast

Special report based on forecast

Indication: Cloudy weather is likely to occur in coming days, hence, go for irrigation, fertilizer and pesticides application. As per SPI value (1-0.49 moderately wet) upto dated 07.11.2018 indicates moderately wet. Moisture is available in the soil hence, paddy crops like mustard, chickpea and pea can be taken as relay or double cropping with having two-three irrigation while for linseed only one-two irrigation is sufficient other than paddy cropping. Rainfed wheat (Var.- C 306, K 8027, H D R 77) can also be cultivated in prevailing soil moisture status. As per NDVI value (0.25 to 0.45) upto dated 04.11.2018 rabi crops are at distress, vigorous and well growth and development stages. As per NDVI value (0.55 to 0.65) dated 07.11.2018, kharif medium and low land rice crop is likely at maturity and post flowering stages.

Upland, Medium and Low Land crops: Go for light irrigation if possible in standing crops of Horsegram, Niger, Safflower, lobia, Rice bean and at 35-40 DAS. Presently, at somewhere, rice crop is at milking to soft dough stages. At **Milking stage:** It has been that particularly in hybrid rice intensity of false smut has become more and the spores of false smut likely to follow wind coming from variable direction and infest adjacent field crops. Therefore, spray Propiconazole or Tilt @ 1 ml per liter of water to check further spreading. At **soft dough stage:** If attack of gundhy bug is in intense quantity, spraying of methyl parathion 2% or Chlorpyrifos 4% or Imidachlorpid dust @ 8-10 kg per acre should be done during morning or in the evening but before sunset. **Other suggestion:** Milking to soft dough stage is very critical and sensitive stage. Moisture deficiency at these stage may cause yield loss. So, at any cost try to maintain moisture or irrigate from available water resources.

Rabi crops seed treatment
Chickpea, Pea, Lentil: First treat the seed with fungicide (Bevistin @ 2g or Thiram @ 3g/kg. After 6 hrs again make coating of chlorpiriphos @ 5 ml/kg of seed followed by Bioagent like Trichoderma @ 5g and Pseudomonas @ 10 g/kg of seed and lastly with rhizobium and PSB in a sequence of FIMRP.
Mustard/Toria/ra/linseed: Bevistin 50 % WP @ 2 g or Captan 3 g/kg can be used to treat the seed.
Potato: First treat the potato seed with Indofil M 45/Diathane M 45 @ 3 g/liter of water and then apply pastes of Trichoderma @ 5g and Pseudomonas @ 10 g/kg of seed. Use dried treated seeds for planting.
Wheat: Treat the seed before sowing with Carbenidazole 50 % WP available in market in variable names as Bevistin, Derosal, Hitastin, Dhanustin @ 2 g or Carboxin as Vitavax or Vitavax power @ 2g/kgof seed or Tebuconazole(Rexcil) @ 1.5 gm/kg of seed

In Fallow medium (Don 3)land select following crops:
Toria: Crop sown in the month of September is at flowering stage. Due to cool and clear sunny weather, more attack of aphids are to be pruned hence, spraying of Rogar (Dimethoate) @ 2ml or Monochrotophos 1 ml per liter of water is justifiable.
Mustard: Timely sown crop is at branching stage. Before flowering prior to 45 to 50 DAS, go for light irrigation and after two days of irrigation, broadcast 20-25 kg urea/acre. Cool weather is conducive for the attack of aphids (High humid, foggy weather and partly cloudy condition). So, it is highly recommended to spray Rogar (Dimethoate) @ 2 ml or Monochrotophos 36 EC @ 1 ml/l water during evening time. If leaf blight occurrence is seen 35-40 DAS, spraying of Cantaf (Hexaconazole @ 1 ml) or Indofil M 45 @ 2 g or Roko(Thiophanate methyl) Topsin @ 1g per lt. water is allowed.

Green pea: Timely sown crop is at stem elongation stage. After 20-25 DAS go for cultural operation. Regular monitoring of field is necessary. Spraying should be followed after seeing insects attack above ETL. Spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water is recommended. Incidence of powdery mildew is favoured by cool and foggy weather during morning hour. So, go for prophylactic spraying of Sulfex @ 3 g or Karathene 1 ml per lt water twice at weekly interval during evening time. For proper control and management of Powdery mildew spraying of newly emerged fungicide Double dose (Iprodione 25 % WP + Carbendazim 25 % WP) 2 g per lt water twice at weekly interval. Is recommended

Field pea: Varieties like Rachna, D.D.R.-23, Swarnrekha etc. are recommended to adopt any one of them for grain purpose.

Potato: Some of the farmers who have sown their crop 25-30 days before and yet have not earthen up the crop are advised to do it immediately to take advantage of intermittent rains. Farmers, who want to cultivate potato are advised to select varieties viz. Kufri Ashoka and Kufri Pukhraj, Kufri Surya and Kufri Puskar of 80-90 days crop. may start preparation of land by ploughing 2-3 times with deshi plough. Mix well rotten FYM @ 4 t per acre thoroughly and at the time of final preparation of land add Malathion or Chlorpyrifos dust @ 10-12 kg or Neem or Karanj cake @ 100-120 kg per acre as prophylactic measure for the control of Termites. For the management of Early and Late blight diseases, before sowing of seed tubers of 25-30g each @ 12 t per acre, go for treatment with fungicide like Metalaxil or Ridomil MZ @ 1.5 ml per liter of water for one hour. Fertilizers @ 40 kg Urea + 32 kg DAP + 80 kg Sulphur/65 kg Urea + 200 kg SSP (24 kg Sulphur will be available) + 80 kg MOP are needed for an acre land.

Chick pea is recommended with selection of any one improved varieties like - Birsa chana -3, B.G.- 372, B.G.-256, K.W.R.-108, Pant G.-108, I14 and Kabuli type varieties like B.G. 1053, 1003, H.K.-94-134 and Kak 2 etc. Before sowing it is suggested to treat the seed with Thiram @ 3 g per kg of seed followed by Trichoderma viride @ 5 g. Rizobium culture and PSB. Maintain row to row distance of 30 cm apart and plant to plant 10 cm. Often, 5 kg urea along with 45 kg SSP and 15 kg MOP at the time of sowing is needed. For more branching and subsequently more flowering nipping should be done 30 DAS. After nipping light irrigation and 2 days after irrigation, broadcast 5 kg urea is highly recommended. Chance of collar rot as both soil and environment temperature is conducive for seedling stage hence, necessary to increase the heat load in the system by providing light fertigation with hydrated lime stone. Pythium root and seed rot in late sown at seedling stage. Seeing the weather situation spraying of Carbendazim @ 2.5 g/lt. and Metalaxyl @ 1 ml/lit alternatively twice at 10 days interval is recommended.

Wheat: After the harvest of rice crop, if sufficient moisture is available in their fields, farmers can select improved varieties like C 306, K 8027, H D R 77 etc. Treat the seeds firstly with fungicide followed by insecticide making 5-6 hours of gap in subsequent treatment. At the time of sowing apply 60:25:15 kg NPK per acre. 1/3rd N and full dose of P and K should be applied as basal. Apply 10 kg per acre 1.5% Chloropyrifos dust during the final land preparation for termite check. When the crop attains 28-30 Days old, spray Isoprotruran 75 per cent dust @ 600 g per acre to control the weeds. For weed control (only atCRI stage)- spray Isoprotruran 75 per cent dust @ 600 g as well as 2.4 D @ 300 g or Sulfosulfuron 75 per cent WP @ 500 g per acre in 300-400 liter of water for the control of all types of weed. At CRI stage crop facing leaf blight disease, spraying of Indofil M 45 @ 2 g per lt water is suggested.

Lentil: Timely sown crop is at branch stage (25-35 DAS) and present weather is very conducive for the occurrence of wilt disease hence, spraying of Carbendazim @ 1 g per lt. water twice at weekly interval is suggested. Still to utilize the available soil moisture farmers are advised to finish their sowing by adopting improved varieties- PL 406, PÅL 639 till end of November. as soil and environment temperature is declining. In Plant geometry of R-R 30 cm and P-P 10 cm, apply 5 kg Urea + 45 kg DAP + 15 kg MOP at the time of sowing. For wilt control spray Carbendazim @ 1 g per lt. water twice at weekly interval.

Linseed: Timely sown crop is at branching stage. Irrigation is needed at this stage. The critical period of crop-weed competition is initial 35-45 DAS and ensuring weed free/managed condition during this period are essential to obtain maximum fertilizer and water use efficiency and better production. Thus, weedicide Isoprotruran 75 WP @ 400 g either with 2.4-D (Sodium salt) @ 200 g per acre as post emergence at 35 DAS is essentially needed followed by one hand weeding after a week. Present lower temperature and foggy condition is beneficial at branching stage (30-35 DAS) which favours in growth and development and more numbers of offshoots. At present precaution should be more against disease like Alternaria blight and powery mildew hence, for blight prophylactic spray of newly emerged fungicide Double dose (Iprodione 25 % WP + Carbendazim 25 % WP) @ 2 g per lt. water and for Powdery mildew Calixin (Tridemorf) 80 % EC @ 5 ml per 10 lt water twice are highly recommended.

Forage crop: Go for top dressing of Urea @ 15-20 kg/acre in recently sown fodder crops. Still time for the cultivation of Hybrid Napier (IGFR 6 or 10), Guinea grass, Cowpea (Bandel lobia 1 or 2, Pant lobia 1), Barseem (Bardan or Bandel barseem 2), Maize (Agricultal tall, Rice bean etc.). Fertilizer dose- 4 t FYM+Urea 130 kg + SSP 375 + MOP 40 kg /acre and seed rate - 10-15 kg /acre. For hybrid Napier 12,000 slips/acre are required.

Pigeonpea: Crops at pre flowering to initial flowering stage hence, intercultural operation followed by broadcasting DAP @ 20-25 kg per acre for getting potential yield is recommended during clear weather. Apply soil application as Borax @ 4kg/acre or foliar application @ 1-1.5 ppm solution. This month is crucial for the attack of Mites, blister beetle insects as well as sterility disease. Profenophos 50 EC, methomyl 40 SP or monocrotophos 36 SL kill the larvae but as the webs protect them from contact insecticides hence along with contact insecticides, mixing of fumigant insecticide such as DDVP @ 0.5 ml/l is required to make the larvae come out from the web. For Mites and Aphids, Dimethoate 30 EC @ 2ml/l and acaricides such as Dicofol 18.5 EC @ 2.5 ml/l water, for Blister beetle synthetic pyrethroids such as Cypermethrin 10 EC @ 1.0 ml/l or Lambda cyhalothrin 5, EC @ 1.0 ml/l water; for sterility mosaic Dicofol 18.5 EC 2.5 ml/l or Oxydemeton methyl 25 EC or Dimethoate 30 EC 2.0 ml/l or ml/l water on alternate row twice at an interval of 10 days are recommended.

Tuber crop: like- Sweet potato (Pusa safed, S 30, Kalmegh, Rajendra 5); Jameenkand; Semalkand and misrikand (local, rajendra 1) can be taken in the month of October.

For vegetable production, following varieties are recommended:- Go for the cultivation of short duration vegetables like- Bodi, Frenchbean and leafy vegetables; low water requirement vegetables like- tomato, brinjal, capsicum, rainy season cauliflower, potato and onion can be taken by adopting water conservation techniques like- mulching and drip method. Varieties suitable for **Tomato** Swarn lahima, Arka abha, **Early Cabbage:-** Pride of India, Golden acre, Early drum head, **Cauliflower:-** Pusa ketki, Kumari, Early synthetic, Pusa dipali, Pusa subhra **Brinjal:-** Swarn pratima, Swarn shyamli, Swarn mani.

For fruits sapling plantation, following recommendation are made :- **Custard apple:-** Arka sahan, **Banana:-** Behula, Robusta, G-9, **Papaya:-** Pusa delicious, Pusa dwarf, Kurg honey dew, Pusa nanha and **Guaava:-** Allahabad safeda, Lucknow 49, Arka mridula, Lalit, Arka amulya. In cultivable water land, farmers are advised for the plantation of forest sapling like *Acacia*, *Gambhar* and *Teak*.

Vegetables ONION: Right and optimum time for nursery raising. Grow Improved and high yielding variety like N 53, Pusa red, Arka miketan, Arka kaliaan, Agrifoung dark red, Pusa white round and flat, Pusa madhavi, Bombay selection, Patna white and Bellary red etc. 4 kg seeds are required of one acre and 200 square meter 200 m² is sufficient for nursery for one acre planting. Lay out 3 mt long 2 mt wide of 15 cm raised beds. Maintain 70 cm between beds for easy intercultural operation and watering. Treat the beds with 5 g Thiram per beds. Sow the seeds at 5-7 cm apart with 1-2 cm soil depth. Cover the seeds with dried soil or dried powdered cowdung and press a little followed by straw to cover the beds. Sprinkle water to the beds. After emergence remove the straw slowly without affecting the seedlings. Spray 2g Bavistin or Thiram in 1 litre water at 15 days interval to avoid nursery insects and irrigate the beds as per the needs.

Cole crops (Cauliflower, cabbage) - Farmers having nursery of cauliflower (Late Nov and Dec. Maghi, Snowball 16, dania, Pusa snowball 21) and cabbage (Improved varieties, Late drumhead and subvoy cabbage) seedlings at 3-4-week stage can be planted in the main field. Before planting dip the seedlings root in trichoderma mixing 5 g in one liter of water for 5-6 hrs. Apply 90 g well rotten FYM and urea 120 kg(60 kg at the time of planting and rest 60 kg during earthing up) + full dose of SSP 120 kg and MOP 40 kg/acre as basal. Plant the seedlings with a row spacing of 50 cm and 45 cm within the plants. Plant 2 rows of Marigold/Mustard (alternate host.) at every 20 rows of cole crops to prevent the attack of pest like Spodoptera caterpillar. Further in cole crops to prevent from occurrence of hallow stem formation apply recommended dose of Nitrogenous fertilizer along with 5 kg of Borax/acre as basal during transplanting time. If brinjal crop is seen infested with fruit rot and wilt - Spray Blitox 50 @ 2 gm or Bavistin @ 0.5 gm/lit of water. To control beetle attack in Okra, Brinjal and Cucurbitaceous crop, spray Sevin WP @ 4 gm/lit of water.

Fruit crops Spraying of Monochrotophos @ 1 ml or Imidachlorpid @ 1 g per liter of water have to be done to control the weather generated insects and pests but should be sprayed during clear weather.

Recommendation for plant protection other than rice crop:

- In Arhar :Areas having deficient in rain are more likely to prone with variant leaf eating and sucking pests hence hence, advised to spray Monochrotophos @ 1 ml per liter of water by mixing Teepol @ 0.5 ml per liter of water during day time after seeing the weather condition. Also, use systemic insecticide Thiametoxam 14.5 SC @ 1 ml per 5 lt ware or non systemic insecticide Indoxcarb @ 1ml per 2 lt. water.
- For leaf blight in pulse crop, spray Indofil M 45 @ 2 g per lt of water.
- **Green pea :** Crop is at vegetative stage and mostly seen with the infestation of leaf eating insects due to variable weather condition and can be controlled by spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water.
- **Vegetables** -It is seen that attack of leaf eating insects have been increased in cucurbitaceous crops like sponge gourd, ridge gourd, bottle gourd, cowpea, french bean, brinjal, cauliflower and cabbage. Hence, imidachlorpid @ 1g or Kung fu @ 2 ml per liter of water should be sprayed. In early and late blight of tomato 3 g of Indofil M 45 or Ridomil MZ @ 1.5 g and in brinjal to control the blight disease spraying of Blitox 50 @ 3 g per liter of water is found fairly good. For the control of fruit fly in cucurbitaceous family vegetable crops, apply Dichlorvos @ 2ml per lt. of water.
- For the control of mites, jassids and hoppers in Okra, Chili and cucurbitaceous crops; apply neem oil having concentration of 1500 ppm @ 3 ml per liter of water or chemicals like Omites or Rogar @ 2ml per liter of water. For the control of YM in okra, spray Imidachlorpid @ 0.5 ml per liter of water at an interval of 10-15 days. For pod and fruit borer in brinjal, spray Thiodcarb @ 1.5-2 g per lt of water. For the control of tomato and brinjal wilt, spray Blitox 50 @ 3 g per lt of water. For Anthracnose disease in cucurbitaceous family hence, Blitox 50 @ 3g per liter of water have to be sprayed as a prophylactic measure.
- **Potato:** Due to cloudy weather in next five days, infestation of early and late blight intensity will become more prominent. Hence, Kriklasil or Ridomil chemical @ 1.5 g per liter of water have to be sprayed to check it for further spreading. In some places, potato is at vegetative growth stage and curling of leaves are seen. To control this Caldan 50SP @ 1 g per liter of water have to be sprayed.

Recommendation for Livestock :
 Keep the animals in a covered shed/area during night to protect them from a sudden drop in temperature. Keep the animal bedding dry in the sheds every day. Vaccinate against FMD, Haemorrhagic Septicaemia (HS), Black Quarter (BQ), Enterocemia during this month. Take adequate care to prevent occurrence of Mastitis. Anti-parasitical medicines and solutions administered not only protect the animals from diseases, but they also help in better assimilation of the feed that is given to the animals, thereby increasing their productivity. Essential salts / mineral mixture in appropriate quantities must be mixed with feed and given to the animals. Due care should be taken to store/procure fodder for periods of shortage that may occur during the winter months in certain areas. To get the maximum benefit from Oat crops, improved varieties (Sirsia Oat 6, Sirsa Oat 9, J.H.O.822, J.H.O.851) may be sown from the middle of this month and sowing of Barseem must be completed by the middle of this month. Goat and Sheep must be vaccinated against PPR once every three years. Bodies of sheared sheep after 21 days should be drenched with disinfectants to protect them against ecto-parasites.

Fish rearing: As the temperature of environment along with water is going down and the ponds hang over crowded are likely to be infected with Red spot disease (Epizootic Ulcerative Syndrome, EUS) and some where it is reported also. So, CFAX or AQUANEEM 10X @ 1 liter in 100 liter of water mixed thoroughly and spray in equal proportions everywhere in the ponds and lakes. It is used both for the eradication of "EUS" disease and as a preventive measure. The mixture has to be made in plastic buckets.

Poultry: Low temperature during night time is very devastating. So, proper shelter management to raise the shelter air temperature increase the number of bulbs or provide hot air blower to conditioned the room temperature.

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Technical Officer

Pradeep Prasad
Associate Director



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Agricultural suggestion based on weather forecast

Special report based on forecast	<p>Indication: Cloudy weather is likely to occur in coming days hence, go for irrigation, fertilizer, and pesticides application. As per SPI value (0 – 0.99 mildly wet) upto dated 07.11.2018 indicates mildly wet. Moisture is available in the soil hence, paddy crops like mustard, chickpea and pea can be taken as relay or double cropping with having two-three irrigation while for linseed only one-two irrigation is sufficient other than paddy cropping. Rainfed wheat (Var. - C 306, K 8027, HDR 77 can also be cultivated in prevailing soil moisture status. As per NDVI value (0.25 to 0.45) upto dated 04.11.2018 rabi crops are at distress, vigorous and well growth and development stages. As per NDVI value (0.55 to 0.65) dated 07.11.2018, kharif medium and low land rice crop is likely at maturity and post flowering stages.</p>
	<p>Upland, Medium and Low Land crops : Go for light irrigation if possible in standing crops of Horsegram, Niger, Safflower, Lobia, Rice bean and at 35-40 DAS. Presently, at somewhere, rice crop is at milking to soft dough stages. At Milking stage: It has been that particularly in hybrid rice intensity of false smut has become more and the spores of false smut likely to follow wind coming from variable direction and infest adjacent field crops. Therefore, spray Propiconazole or Tilt @ 1 ml per liter of water to check further spreading. At soft dough stage : If attack of gundhy bug is in intense quantity, spraying of methyl parathion 2 % or Chlorpyrifos 4 % or Imidachlorpid dust @ 8-10 kg per acre should be done during morning or in the evening but before sunset. Other suggestion : Milking to soft dough stage is very critical and sensitive stage. Moisture deficiency at this stage may cause yield loss. So, at any cost try to maintain moisture or irrigate from available water resources.</p>
	<p>Rabi crops seed treatment Chickpea, Pea, Lentil : First treat the seed with fungicide (Bevistin @ 2g or Thiram @ 3g/kg. After 6 hrs again make coating of chlospiripros @ 5 ml /kg of seed followed by Bioagent like Trichoderma @ 5g and Pseudomonas @ 10 g /kg of seed and lastly with rhizobium and PSB in a sequence of FIMRP. Mustard/Toria/rai/Linseed : Bevistin 50 % WP @ 2 g or Captan 3 g/kg can be used to treat the seed. Potato: First treat the potato seed with Indofil M 45/Diathane M 45 @ 3 g/liter of water and then apply pastes of Trichodermerm @ 5g and Pseudomonas @ 10 g /kg of seed. Use dried treated seeds for planting. Wheat : Treat the seed before sowing with Carbendazim 50 % WP available in market in variable names as Bevistin, Derosal, Hitastin, Dhanustin @ 2 g or Carboxin as Vitavex or Vitavex power @ 2g /kg of seed or Tebuconazole (Rexcil) @ 1.5 gm /kg of seed</p>
	<p>In Fallow medium (Don 3)land select following crops : Toria : Crop sown in the month of September is at flowering stage. Due to cool and clear sunny weather , more attack of aphids are to be pronounced, spraying of Rogar (Dimethoate) @ 2ml or Monochrotophos 1 ml per liter of water is justifiable. Mustard: Timely sown Crop is at branching stage. Before flowering prior to 45to 50 DAS, go for light irrigation and after two days of irrigation, broadcast 20-25 kg urea/acre. Coming weather is conducive for the attack of aphids (High humid, foggy weather and partly cloudy condition). So, it is highly recommended to spray Rogar (Dimethoate) @ 2 ml or Monochrotophos 36 EC @ 1 ml/lit water during evening time. If leaf blight occurrence is seen 35-40 DAS , spraying of Cantaf (Hexaconazole @ 1 ml) or Indofil M 45 @ 2 g or Roko (Thiophanate methyl) Topsin @ 1g per lt. water is allowed. Green pea : Timely sown Crop is at stem elongation stage. After 20-25 DAS go for cultural operation. Regular monitoring of field is necessary. Spraying should be followed after seeing insects attack above ETL . Spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water is recommended. Incidence of powdery mildew is favoured by cool and foggy weather during morning hour. So, go for prophylactic spraying of Sulfex @ 3 g or Karathene 1 ml per lt water twice at weekly interval during evening thime. For proper control and management of Powdery mildew spraying of newly emerged fungicide Double dose (Iprodione 25 % WP + Carbendazim 25 % WP) 2 g per lt water twice at weekly interval. Is recommended</p>
	<p>Field pea : Varieties like Rachna, D.D.R.-23, Swarnrekha etc. are recommended to adopt any one of them for grain purpose. Potato : Some of the farmers who have sown their crop 25-30 days before and yet have not earthen up the crop are suggested to do it immediately to take advantage of intermittent rains. Farmers, who wants to cultivate potato are advised to select varieties viz. Kufri Ashoka and Kufri Pukhraj, Kufri Surya and Kufri Puskar of 80-90 days crop may start preparation of land by ploughing 2-3 times with deshi plough. Mix well rotten FYM @ 4t per acre thoroughly and at the time of final preparation of land add Malathion or Chlorpyrifos dust @ 10-12 kg or Neem or Karanj cake @ 100-120 kg per acre as prophylactic measure for the control of Termites. For the management of Early and Late blight diseases, before sowing of seed tubers of 25-30g each @ 12 t per acre, go for treatment with fungicide like Metalaxil or Ridomil MZ @ 1.5 ml per liter of water for one hour. Fertilizers @ 40 kg Urea + 32 kg DAP + 80 kg MOP + 10 kg Sulphur /65 kg Urea + 200 kg SSP (24 kg Sulphur will be available) + 80 kg MOP are needed for an acre land. Chick pea is recommended with selection of any one improved varieties like – Birsa chana – 3, B.G.- 3/2, B.G.-256, K.W.R.-108, Pant G.-108, 114 and Kabuli type varieties like B.G. 1053, 1003, H.K.-94-134 and Kak 2 etc. Before sowing it is suggested to treat the seed with Thrim @ 3 g per kg of seed followed by Trichoderma viride @ 5 g, Rizobium culture and PSB . Maintain row to row distance of 30 cm apart and plant to plant 10 cm . Often, 5 kg urea along with 45 kg SSP and 15 kg MOP at the time of sowing is needed. For more branching and subsequently more flowering nipping should be done 30 DAS. After nipping light irrigation and 2 days after nipping, broadcast 5 kg urea is highly recommended . Chance of collar rot as both soil and environment temperature is conducive for seedling stage hence, necessary to increase the heat load in the system by providing light fertigation with hydrated lime stone. Pythium root and seed rot in late sown at seedling stage. Seeing the weather situation spraying of Carbendazim @ 2.5 g/lt. and Metalaxyl @ 1 ml/lit alternatively twice at 10 days interval is recommended. Wheat: After the harvest of rice crop, if sufficient moisture is available in their fields, farmers can select rainfed improved varieties like C 306, K 8027, HDR 77 etc. Treat the seeds firstly with fungicide followed by insecticide making 5-6 hours of gap in subsequent treatment. At the time of sowing apply 60:25:15 kg NPK per acre. 1/3rd N and full dose of P and K should be applied as basal. Apply 10 kg per acre 1.5% Chloropyrifos dust during the final land preparation for termite check. When the crop attains 28-30 Days old, spray Isoproturan 75 per cent dust @ 600 g per acre to control the weeds. For weed control (only atCRI stage)- spray Isoproturan 75 per cent dust @ 600 g as well as 2,4 D @ 300 g or Sulfosulfuron 75 per cent WP @ 500 g per acre in 300-400 liter of water for the control of all types of weed. At CRI stage crop facing leaf blight disease , spraying of Indofil M 45 @ 2 g per lt water is suggested.</p>
	<p>Lentil : Timely sown crop is at branch stage (25-35 DAS) and present weather is very conducive for the occurrence of wilt disease hence, spraying of Carbendazim @ 1 g per lt. water twice at weekly interval is suggested. Still to utilize the available soil moisture farmers are advised to finish their sowing by adopting improved varieties- PL 406, PAL 639 till end of November as soil and environment temperature is declining . In Plant geometry of R-R 30 cm and P-P 10 cm, apply 5 kg Urea + 45 kg DAP + 15 kg MOP at the time of sowing. For wilt control spray Carbendazim @ 1 g per lt. water twice at weekly interval. Linseed : Timely sown crop is at branching stage. Irrigation is needed at this stage. The critical period of crop-weed competition is initial 35-45 DAS and ensuring weed free/managed condition during this period are essential to obtain maximum fertilizer and water use efficiency and better production. Thus, weedicide Isoproturan 75 WP @ 400 g either with 2,4-D (Sodium salt) @ 200 g per acre as post emergence at 35 DAS is essentially needed followed by one hand weeding after a week. Present lower temperature and foggy condition is beneficial at branching stage (30-35 DAS) which favours in growth and development and more numbers of offshoots. At present precaution should be more against disease like Alternaria blight and powery mildew hence, for blight prophylactic spray of newly emerged fungicide Double dose (Iprodione 25 % WP + Carbendazim 25 % WP) @ 2 g per lt. water and for Powdery mildew Calixin (Tridemorf 80 % EC @ 5 ml per 10 lt water twice are highly recommended.</p>
	<p>Forage crop : Go for top dressing of Urea @ 15-20 kg/acre in recently sown fodder crops. Still time for the cultivation of Hybrid Napier (IGFR 6 or 10), Guinea grass, Cowpea (Bandel lobia 1 or 2, Pant lobia 1), Berseneem (Bardan or Bandel berseem 2), Maize (Agrical tall, Rice bean etc.). Fertilizer dose- 4 t FYM+Urea 130 kg + SSP 375 + MOP 40 kg /acre and seed rate – 10-15 kg /acre. For hybrid Napier 12,000 slips /acre are required.</p>
	<p>Pigeonpea : Crops at pre flowering to initial flowering stage hence, intercultural operation followed by broadcasting DAP @ 20-25 kg per acre for getting potential yield is recommended during clear weather. Apply soil application as Borax @ 4kg/acre or foliar application @ 1- 1.5 ppm solution. This month is crucial for the attack of Mites, blister beetle insects as well as sterility disease. Profenophos 50 EC, methomyl 40 SP or monocrotophos 36 SL kill the larvae but as the webs protect them from contact insecticides hence along with contact insecticides, mixing of fumigant insecticide such as DDVP @ 0.5 ml/l is required to make the larvae come out from the web. For Mites and Aphids, Dimethoate 30 EC @ 2ml/l and acaricides such as Dicofol 18.5 EC @ 2.5 ml/l water, for Blister beetle synthetic pyrethroids such as Cypermethrin 10 EC @ 1.0 ml/l or Lambda cyhalothrin 5 EC @ 1.0 ml/l water; for sterility mosaic Dicofol 18.5 EC 2.5 ml or Oxydemeton methyl 25 EC or Dimethoate 30 EC 2.0 ml or ml/l water on alternate row twice at an interval of 10 days are recommended.</p>
	<p>Tuber crop: like- Sweet potato (Pusa safed, S 30, Kalmegh, Rajendra 5); Jameenkand; Semalkand and misrikand (local, rajendra 1) can be taken in the month of October. For vegetable production, following varieties are recommended:- Go for the cultivation of short duration vegetables like- Bodi, Frenchbean and leafy vegetables; low water requirement vegetables like- tomato, brinjal, capsicum, rainy season cauliflower, potato and onion can be taken by adopting water conservation techniques like- mulching and drip method. Varieties suitable for Tomato Swarn lahima, Arka abha, Early Cabbage:- Pride of India, Golden acre, Early drum head, Cauliflower:- Pusa ketki, kumari, Early synthetic, Pusa dipali, Pusa subhra Brinjal:- Swarn pratima, Swarn shyamli, Swarn mani. For fruits sapling plantation, following recommendation are made :- Custard apple:- Arka sahan, Bananna:- Behula, Robusta, G-9, Papaya:- Pusa delicious, Pusa dwarf, Kurg honey dew, Pusa nanha and Guava:- Allahabad safeda, Lucknow 49, Arka mridula, Lalit, Arka amulya. In cultivable waste land, farmers are advised for the plantation of forest sapling like Acacia, Gamhar and Teak.</p>
	<p>Vegetables ONION: Right and optimum time for nursery raising. Grow Improved and high yielding variety like N 53, Pusa red, Arka niktan, Arka kaliaan, Agrifoung dark red, Pusa white round and flat, Pusa madhavi, Bombay selection, Patna white and Bellary red etc. 4 kg seeds are required of one acre and 200 square meter 200 m² is sufficient for nursery for one acre planting. Lay out 3 mt long 2 mt wide of 15 cm raised beds. Maintain 70 cm between beds for easy ntercultural operation and watering. Treat the beds with 5 g Thiram per beds. Sow the seeds at 5-7 cm apart with 1-2 cm soil depth. Cover the seeds with dried soil or dried powdered cowdung and press a little followed by straw to cover the beds. Sprinkle water to the beds. After emergence remove the straw slowly without affecting the seedlings. Spray 2g Bavistin or Thiram in 1 litre water at 15 days interval to avoid nursery insects and irrigate the beds as per the needs. Cole crops (Cauliflower, cabbage) Farmers having nursery of cauliflower (Late Nov and Dec, Maghi, Snowball 16, dania, Pusa snowball 21) and cabbage (Improved varieties, Late drumhead and subvogy cabbage) seedlings at 3-4-week stage can be planted in the main field. Before planting dip the seedlings root in trichoderma mixing 5 g in one liter of water for 5-6 hrs. Apply 90 g well rotten FYM and urea 120 kg/60 kg at the time of planting and rest 60 kg during earthing up) + full dose of SSP 120 kg and MOP 40 kg/acre as basal. Plant the seedlings with a row spacing of 50 cm and 45 cm within the plants. Plant 2 rows of Marigold/Mustard (alternate host.) at every 20 rows of cole crops to prevent the attack of pest like Spodoptera caterpillar. Further in cole crops to prevent from occurrence of hollow stem formation apply recommended dose of Nitrogenous fertilizer along with 5 kg of Borax/acre as basal during transplanting time. If brinjal crop is infested with fruit rot and wilt - Spray Blitox 50 @ 2 gm or Bavistin @ 0.5 gm/ lit of water. To control beetle attack in Okra, Brinjal and Cucurbitaceous crop, spray Sevin WP @ 4 gm/lit of water.</p>
	<p>Fruit crops Spraying of Monochrotophos @ 1 ml or Imidachlorpid @ 1 g per liter of water have to be done to control the weather generated insects and pests but should be sprayed during clear weather.</p>
	<p>Recommendation for plant protection other than rice crop: <ul style="list-style-type: none"> ● In Arhar :Areas having deficient in rain are more likely to prone with variant leaf eating and sucking pests hence hence, advised to spray Monochrotophos @ 1 ml per liter of water by mixing Teepol @ 0.5 ml per liter of water during day time after seeing the weather condition. Also, use systemic insecticide Thiametozam 14.5 SC @ 1 ml per 5 lt water or non systemic insecticide Indoxacarb @ 1 ml per 2 lt. water. ● For leaf blight in pulse crop, spray Indofil M 45 @ 1 ml per lt of water. ● Green pea : Crop is at vegetative stage and mostly seen with the infestation of leaf eating insects due to variable weather condition and can be controlled by spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water. ● Vegetables : It is seen that attack of leaf eating insects have been increased in cucurbitaceous crops like sponge gourd, ridge gourd, bottle gourd, cowpea, french bean, brinjal, cauliflower and cabbage. Hence, imidachlorpid @ 1g or Kung fu @ 2 ml per liter of water should be sprayed. In early and late blight of tomato 3 g of Indofil M 45 or Ridomil MZ @ 1.5 g and in brinjal to control the blight disease spraying of Blitox 50 @ 3 g per liter of water is found fairly good. For the control of fruit fly in cucurbitaceous family vegetable crops, apply Dichlorvos @ 2ml per lt. of water. ● For the control of mites, jassids and hoppers in Okra, Chilli and cucurbitaceous crops; apply neem oil having concentration of 1500 ppm @ 3 ml per liter of water or chemicals like Omitec or Rogar @ 2ml per liter of water. For the control of YEM in okra, spray Imidachlorpid @ 0.5 ml per liter of water at an interval of 10-15 days. For pod and fruit borer in brinjal, spray Thiodocarb @ 1.5-2 g per lt of water. For the control of tomato and brinjal wilt, spray Blitox 50 @ 3 g per lt of water. For Anthracnose disease in cucurbitaceous family hence, Blitox 50 @ 3g per liter of water have to be sprayed as a prophylactic measure. ● Potato: Due to cloudy weather in next five days, infestation of early and late blight intensity will become more prominent. Hence, Krikalsil or Ridomil chemical @ 1.5 g per liter of water have to be sprayed to check it for further spreading. In some places, potato is at vegetative growth stage and curling of leaves are seen. To control this Caldan 50SP @ 1 g per liter of water have to be sprayed. </p>
	<p>Recommendation for Livestock : Keep the animals in a covered shed/area during night to protect them from a sudden drop in temperature. Keep the animal bedding dry in the sheds every day. Vaccinate against FMD, Haemorrhagic Septicaemia (HS), Black Quarter (BQ), Enteroxemia during this month. Take adequate care to prevent occurrence of Mastitis. Anti-parasitical medicines and solutions administered not only protect the animals from diseases, but they also help in better assimilation of the feed that is given to the animals, thereby increasing their productivity. Essential salts / mineral mixture in appropriate quantities must be mixed with feed and given to the animals. Due care should be taken to store/procure fodder for periods of shortage that may occur during the winter months in certain areas. To get the maximum benefit from Oat crops, improved varieties (Sirsra Oat 6, Sirsa Oat 9, J.H.O.822, J.H.O.851) may be sown from the middle of this month and sowing of Berseem must be completed by the middle of this month. Goat and Sheep must be vaccinated against PPR once every three years. Bodies of sheared sheep after 21 days should be drenched with disinfectants to protect them against ecto-parasites. Fish rearing: As the temperature of environment along with water is going down and the ponds have over crowded are likely to be infected with Red spot disease (Epizootic Ulcerative Syndrome, EUS) and some where it is reported also, So, CFAX or AQUANEEM 10X @ 1 liter in 100 liter of water mixed thoroughly and spray in equal proportions everywhere in the ponds and lakes. It is used both for the eradication of "EUS" disease and as a preventive measure. The mixture has to be made in plastic buckets. Poultry: Low temperature during night time is very devastating. So, proper shelter management to raise the shelter air temperature increase the number of bulbs or provide hot air blower to conditioned the room temperature.</p>

Binod Kumar
Technical Officer

Pradeep Prasad
Associate Director



GRAMIN KRISHI MAUSAM SEWA BIRSA AGRICULTURAL UNIVERSITY (ZONAL RESEARCH STATION, DARISAI)

India Meteorological Department, Meteorological centre Ranchi receive forecast data from
Ministry of Earth Science New Delhi Government of India for Zonal Research Station
Darisai under Birsa Agricultural University for the next 120 hours



Ref : 13/2018/GKMS/Darisai(92)
Date : 13.11.2018
Web : bauranchi.org

Agromet Advisory Service Bulletin for West Singhbhum (14-18 Nov 2018)

Ph No. -9334729740(m)
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Forecast data for the following 5 days from IMD

Date	14 Nov 2018	15 Nov 2018	16 Nov 2018	17 Nov 2018	18 Nov 2018
Weather indices					
Rainfall (mm)	0 mm	0 mm	0 mm	0 mm	0 mm
Maximum Temperature (°C)	28	28	28	28	28
Minimum Temperature (°C)	16	17	16	15	15
Total Cloud cover Cloud	Intermittent Clouds	Mostly Cloudy	Mainly Clear	Mainly Clear	Mainly Clear
Maximum Relative Humidity (%)	67	64	60	57	53
Minimum Relative Humidity (%)	35	30	29	32	27
Wind speed (km/hr)	2	4	3	3	3
Wind direction	SW-ly	SW-ly	SW-ly	SW-ly	E-ly

Agricultural suggestion based on weather forecast

Indication: Cloudy weather is likely to occur in coming days hence, go for irrigation, fertilizer and pesticides application. As per SPI value (0 – 0.99 mildly wet) upto dated 07.11.2018 indicates mildly wet. Moisture is available in the soil hence, para crops like mustard, chickpea and pea can be taken as relay or double cropping with having two-three irrigation while for linseed only one-two irrigation is sufficient other than para cropping. Rainfed wheat (Var. - C 306, K 8027, HD R 77) can also be cultivated in prevailing soil moisture status. As per NDVI value (0.25 to 0.45) upto dated 04.11.2018 rabi crops are at distress, vigorous and well growth and development stages. As per NDVI value (0.55 to 0.65) dated 07.11.2018, kharif medium and low land rice crop is likely at maturity and post flowering stages.

Upland, Medium and Low Land crops : Go for light irrigation if possible in standing crops of Horsegram, Niger, Safflower, lobia, Rice bean and at 35-40 DAS. Presently, at somewhere, rice crop is at milking to soft dough stages. At **Milking stage:** It has been that particularly in hybrid rice intensity of false smut and the spores of false smut likely to follow wind coming from variable direction and infest adjacent field crops. Therefore, spray Propiconazole or Tilt @ 1 ml per liter of water to check further spreading. **At soft dough stage :** If attack of gundhy bug is in intense quantity, spraying of methyl parathion 2 % or Chlorpyrifos 4 % or Imidachlorpid dust @ 8-10 kg per acre should be done during morning or in the evening but before sunset. **Other suggestion :** Milking to soft dough stage is very critical and sensitive stage. Moisture deficiency at these stage may cause yield loss. So, at any cost try to maintain moisture or irrigate from available water resources.

Rabi crops seed treatment
Chickpea, Pea, Lentil : First treat the seed with fungicide (Bevistin @ 2g or Thiram @ 3g/kg. After 6 hrs again make coating of chlospiriphos @ 5 ml/kg of seed followed by Bioagromet like Trichoderma @ 5g and Pseudomonas @ 10 g /kg of seed and lastly with rhizobium and PSB in a sequence of FIMRP.
Mustard/Toria/rai/linseed : Bevistin 50 % WP @ 2 g or Captan 3 g/kg can be used to treat the seed.
Potato: First treat the potato seed with Indofil M 45/Diathane M 45 @ 3 g/liter of water and then apply pastes of Trichoderma @ 5g and Pseudomonas @ 10 g/kg of seed. Use dried treated seeds for planting.
Wheat : Treat the seed before sowing with Carbendazim 50 % WP available in market in variable names as Bevistin, Derosal, Hitastin, Dhanustin @ 2 g or Carboxin as Vitavax or Vitavax power @ 2g/kg of seed or Tebuconazole (Rexcil) @ 1.5 gm/kg of seed

In Fallow medium (Don 3)land select following crops :
Toria : Crop sown in the month of September is at flowering stage. Due to cool and clear sunny weather, more attack of aphids are to be broned hence, spraying of Rogar (Dimethoate) @ 2ml or Monocrotophos 1 ml per liter of water is justifiable.
Mustard: Timely sown Crop is at branching stage. Before flowering prior to 45to 50 DAS, go for light irrigation and after two days of irrigation, broadcast 20-25 kg urea/acre. Coming weather is conducive for the attack of aphids (High humid, foggy weather and partly cloudy condition). So, it is highly recommended to spray Rogar (Dimethoate) @ 2 ml or Monocrotophos 36 EC @ 1 ml/l water during evening time. If leaf blight occurrence is seen 35-40 DAS, spraying of Cantaf (Hexaconazole @ 1 ml) or Indofil M 45 @ 2 g or Roko (Thiophanate methyl) Topsin @ 1g per lt. water is allowed.
Green pea : Timely sown Crop is at stem elongation stage. After 20-25 DAS go for cultural operation. Regular monitoring of field is necessary. Spraying should be followed after seeing insects attack above ETL. Spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water is recommended. Incidence of powdery mildew is favoured by cool and foggy weather during morning hour. So, go for prophylactic spraying of Sulfex @ 3 g or Karathene 1 ml per lt water twice at weekly interval during evening time. For proper control and management of Powdery mildew spraying of newly emerged fungicide Double dose (Iprodione 25 % WP + Carbendazim 25 % WP) @ 2 g per lt water twice at weekly interval. Is recommended
Field pea : Varieties like Rachna, D.D.R.-23, Swarnrekha etc. are recommended to adopt any one of them for grain purpose.

Potato : Some of the farmers who have sown their crop 25-30 days before and yet have not earthen up the crop are suggested to do it immediately to take advantage of intermittent rains. Farmers, who want to cultivate potato are advised to select varieties viz. Kufri Ashoka and Kufri Pukhraj, Kufri Surya and Kufri Puskar of 80-90 days crop may start preparation of land by ploughing 2-3 times with deshi plough. Mix well rotten FYM @ 4 t per acre thoroughly and at the time of final preparation of land add Malathion or Chlorpyrifos dust @ 10-12 kg or Neem or Karanj cake @ 100-120 kg per acre as prophylactic measure for the control of Termites. For the management of Early and Late blight diseases, before sowing of seed tubers of 25-30g each @ 12 t per acre, go for treatment with fungicide like Metalaxil or Ridomil MZ @ 1.5 ml per liter of water for one hour. Fertilizers @ 40 kg Urea + 32 kg DAP + 80 kg MOP + 10 kg Sulphur/65 kg Urea + 200 kg SSP (24 kg Sulphur will be available) + 80 kg MOP are needed for an acre land.
Chick pea is recommended with selection of any one improved varieties like - Birsa chana -3, B.G.-372, B.G.-256, K.W.R.-108, Pant G.-108, 114 and Kabuli type varieties like B.G. 1053, 1003, H.K.-94-134 and Kak 2 etc. Before sowing it is suggested to treat the seed with Thiram @ 3 g per kg of seed followed by Trichoderma viride @ 5 g, Rizobium culture and PSB. Maintain row to row distance of 30 cm apart and plant to plant of 10 cm. Often, 5 kg urea along with 45 kg SSP and 15 kg MOP at the time of sowing is needed. For more branching and subsequently more flowering nipping should be done 30 DAS. After nipping light irrigation and 2 days after irrigation, broadcast 5 kg urea is highly recommended. Chance of collar rot as both soil and environment temperature is conducive for seedling stage hence, necessary to increase the heat load in the system by providing light fertigation with hydrated lime stone. Pythium root and seed rot in late sown at seedling stage. Seeing the weather situation spraying of Carbendazim @ 2.5 g/lt. and Metalaxyl @ 1 ml/lt alternatively twice at 10 days interval is recommended.
Wheat : After the harvest of rice crop, if sufficient moisture is available in their fields, farmers can select improved varieties like C 306, K 8027, HD R 77 etc. Treat the seeds firstly with fungicide followed by insecticide making 5-6 hours of gap in subsequent treatment. At the time of sowing apply 60:25:15 kg NPK per acre. 1/3rd N and full dose of P and K should be applied as basal. Apply 10 kg per acre 1.5% Chlorpyrifos dust during the final land preparation for termite check. When the crop attains 28-30 Days old, spray Isoprotruran 75 per cent dust @ 600 g per acre to control the weeds. For weed control (only at CRI stage)- spray Isoprotruran 75 per cent dust @ 600 g as well as 2,4 D @ 300 g or Sulfosulfuron 75 per cent WP @ 500 g per acre in 300-400 liter of water for the control of all types of weed. At CRI stage crop facing leaf blight disease, spraying of Indofil M 45 @ 2 g per lt water is suggested.
Lentil : Timely sown crop is at branch stage (25-35 DAS) and present weather is very conducive for the occurrence of wilt disease hence, spraying of Carbendazim @ 1 g per lt. water twice at weekly interval is suggested. Still to utilize the available soil moisture farmers are advised to finish their sowing by adopting improved varieties- PL 406, PAL 639 till end of November as soil and environment temperature is declining. In Plant geometry of R-R 30 cm and P-P 10 cm, apply 5 kg Urea + 45 kg DAP + 15 kg MOP at the time of sowing. For wilt control spray Carbendazim @ 1 g per lt. water twice at weekly interval.
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For fruits sapling plantation, following recommendation are made :- **Custard apple:-** Arka sahan, **Bananna:-** Behula, Robusta, G-9, **Papaya:-** Pusa delicious, Pusa dwarf, Kurg honey dew, Pusa nanha and **Guava:-** Allahabad safeda, Lucknow 49, Arka mridula, Lalit, Arka amulya. In cultivable waste land, farmers are advised for the plantation of forest sapling like Acacia, Gamhar and Teak.

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● For leaf blight in pulse crop, spray Indofil M 45 @ 2 g per lt of water.
● **Green pea :** Crop is at vegetative stage and mostly seen with the infestation of leaf eating insects due to variable weather condition and can be controlled by spraying of prepared concentration of neem or tobacco leaf extract diluted in the ratio of 1:10 liters or neem oil @ 5 ml per liter of water.
● **Vegetables** - It is seen that attack of leaf eating insects have been increased in cucurbitaceous crops like sponge gourd, ridge gourd, bottle gourd, cowpea, french bean, brinjal, cauliflower and cabbage. Hence, imidachlorpid @ 1g or Kung fu @ 2 ml per liter of water should be sprayed. In early and late blight of tomato 3 g of Indofil M 45 or Ridomil MZ @ 1.5 g and in brinjal to control the blight disease spraying of Blitox 50 @ 3 g per liter of water is found fairly good. For the control of fruit fly in cucurbitaceous family vegetable crops, apply Dichlorvos @ 2ml per lt. of water.
● For the control of mites, jassids and hoppers in Okra, Chill and cucurbitaceous crops; apply neem oil having concentration of 1500 ppm @ 3 ml per liter of water or chemicals like Omite or Rogar @ 2ml per liter of water. For the control of YM in okra, spray Imidachlorpid @ 0.5 ml per liter of water at an interval of 10-15 days. For pod and fruit borer in brinjal, spray Thiodicarb @ 1.5-2 g per lt of water. For the control of tomato and brinjal wilt, spray Blitox 50 @ 3 g per lt of water. For Anthracnose disease in cucurbitaceous family hence, Blitox 50 @ 3g per liter of water have to be sprayed as a prophylactic measure.
● **Potato:** Due to cloudy weather in next five days, infestation of early and late blight intensity will become more prominent. Hence, Krikalsil or Ridomil chemical @ 1.5 g per liter of water have to be sprayed to check it for further spreading. In some places, potato is at vegetative growth stage and curling of leaves are seen. To control this Caldan 50SP @ 1 g per liter of water have to be sprayed.

Recommendation for Livestock :
Keep the animals in a covered shed/area during night to protect them from a sudden drop in temperature. Keep the animal bedding dry in the sheds every day. Vaccinate against FMD, Haemorrhagic Septicaemia (HS), Black Quarter (BQ), Enteroxemia during this month. Take adequate care to prevent occurrence of Mastitis. Anti-parasitical medicines and solutions administered not only protect the animals from diseases, but they also help in better assimilation of the feed that is given to the animals, thereby increasing their productivity. Essential salts / mineral mixture in appropriate quantities must be mixed with feed and given to the animals. Due care should be taken to store/procure fodder for periods of shortage that may occur during the winter months in certain areas. To get the maximum benefit from Oat crops, improved varieties (Sirsra Oat 6, Sirsa Oat 9, J.H.O.822, J.H.O.851) may be sown from the middle of this month and sowing of Berseem must be completed by the middle of this month. Goat and Sheep must be vaccinated against PPR once every three years. Bodies of shered sheep after 21 days should be drenched with disinfectants to protect them against ecto-parasites
Fish rearing: As the temperature of environment along with water is going down and the ponds have over crowded are likely to be infected with Red spot disease (Epizootic Ulcerative Syndrome, EUS) and some where it is reported also. So, CIFAX or AQUANEEM 10X @ 1 liter in 100 liter of water mixed thoroughly and spray in equal proportions everywhere in the ponds and lakes. It is used both for the eradication of "EUS" disease and as a preventive measure. The mixture has to be made in plastic buckets.
Poultry: Low temperature during night time is very devastating. So, proper shelter management to raise the shelter air temperature increase the number of bulbs or provide hot air blower to conditioned the room temperature.

Special report based on forecast