

*Summary* of Agromet Advisory Services for different States of the country Issued by

Agricultural Meteorology Division, India Meteorological

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Thursday, 6<sup>th</sup> December, 2007

(For the period 6<sup>th</sup> to 10<sup>th</sup> December, 2007) The extended version of the bulletin is also available at <u>http://imdagrimet.org</u>

Agromet Advisory

### North West India (Haryana, Punjab, Rajasthan, Uttar Pradesh, Delhi, Himachal Pradesh, Jammu & Kashmir and Uttarakhand)

#### Punjab

- Weather remained dry.
- Mainly dry weather likely to prevail over the State.

#### Advisories

- As there was no significant rainfall in most of the districts during last week and mainly dry weather is likely over the State, apply irrigation to sugarcane, and Horticultural crops.
- Complete sowing gram and lentil using improved varieties.
- Continue picking of cotton.
- Monitor the sugarcane crop for shoot borer infestation & if exceeds economic threshold level, for effective control spray Endosulfan 50 EC 600 ml in 600 liter of water/acre.
- Preparation of field and sowing of wheat can be completed.
- Late blight of potato has been observed in pocket in Jalandhar District. To control it spray with Indofil M-45/Anracol @500-700 gm per acre in 250 -350 litre of water.

#### Haryana

- Rainfall occurred at a few places on 3rd December. Weather remained dry during rest days of the period.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no significant rainfall in most of the districts during last week and mainly dry weather is likely over the State, apply irrigation to sugarcane, and Horticultural crops.
- Continue picking of cotton.
- Monitor the sugarcane crop for shoot borer infestation & if exceeds economic threshold level, for effective control, spray 600 ml Endosulfan 50 EC in 600 liter of water/acre.
- Preparation of field and sowing of wheat can be continued.

#### Rajasthan

- Rain /thundershowers occurred at isolated places in Jaipur, Ajmer and Kota divisions on 03.12.07 and weather remained mainly dry in rest days of all the divisions of the state.
- Mainly dry weather is likely over the State.

- Continue picking of cotton and harvesting guar. Picking of fully open boll of cotton may be undertaken in the early morning hours to maintain the quality of kapas.
- Undertake ploughing of fields and sowing of *rabi* crops viz, mustard, barley, taramira and gram.
- This is proper time for land preparation and planting of potato in and around Bharatpur. Select among Kufri Jyoti, Kufri Badshah, Kufri Sutlej and Kufri Anand. Maintain spacing of 45-60 cm between rows and 15-20 cm between plants for optimum plant population.
- Complete land preparation and sowing of wheat. Select among Raj 3077, HD 2329, HD 2236, WH147 and PBW 343. Adopt seed rate of 100 kg / ha. At the time of last ploughing, apply 50-60 kg N and 50 kg P2O5 per ha.

#### **Uttar Pradesh**

- Rain occurred at isolated places in Faizabad, Kanpur, Allahabad, Lucknow, Jhansi, Agra division on 3rd December and weather was mainly dry in remaining divisions of Uttar Pradesh during the period.
- Weather will be mainly dry in the State.

#### Advisories

- As there was no rainfall in the State during last week and mainly dry weather is likely over U.P for the next three days, apply irrigation to the vegetable, pulses, rai, mustard and toria.
- Prepare the field and undertake sowing of onion and garlic.
- Spray the solution of Dimethoate 1.5 ml/litre of water to control stemborer in turmeric.
- Complete harvesting of rice.
- Complete sowing of late wheat varieties, Malviya-234, Narendra-236, TWT-373 and use seeds rate of 125 kg/hectare after seed treatment by Carbendazim and Thiram.

#### **Himachal Pradesh**

- Weather was mainly dry.
- Isolated rain / snow is likely over the State during next 48 hours.

#### Advisories

- As there was no significant rainfall over the State during last week and only isolated rain is likely over the state for the next 48 hours, apply irrigation to vegetables and toria and early sown wheat, barley and gram crops.
- There is mild chance of attack of leaf spot disease in cabbage and cauliflower. If attack crosses economic threshold level, spray Dithane M 45 to control the disease.
- Continue sowing of spinach, raddish and carrot in low and mid hills.
- Prepare land for sowing of wheat. 90-100 kg seed / ha is required for timely sown crops.
- Prepare land for sowing of barley. The crop should be sown by kera in lines 22 cm apart. 100 kg seeds per hectare are optimum for sowing. Additional 20 to 25 kg seed should be used under rainfed conditions.
- Prepare land and complete sowing of rapeseed and mustard crops within this month.
- Start sowing of *Autumn* varieties of potato.

#### Uttarakhand

- Light rain / snow occurred at isolated places in high reaches on 29th December. Mainly dry weather prevailed during rest of the week.
- Isolated rain / snow likely over the State.

- As there was no rainfall in the State during last week and only isolated rain / snow likely over the State during next 48 hours, apply irrigation to toria, pea and potato.
- Undertake intercultural operations, in potato and in orchards to keep the field weed free.
- Undertake weeding to conserve soil moisture in toria/pea.
- Undertake harvesting of matured crops of sugarcane.
- Continue field preparation and sowing of wheat areas using certified seeds.

#### Jammu & Kashmir

• Isolated rain/snow is likely over Jammu & Kashmir during next 48 hours.

#### Advisories

- Apply irrigation to vegetable and fruit crops in Kashmir division and to vegetables, toria and fruit crops in Jammu division as there was no rainfall in the State during last week and isolated rain/snow are likely during next 48 hours.
- Drain out water from the field 10-15 days before harvesting of rice in Jammu division. Continue harvesting of the matured crop on bright sunny days.
- Prevailing weather conditions may be favorable for the mild infestation of aphids in toria crop in Jammu division. If the pest population crosses ETL, spray the crop with Chloropyriphos 20EC @ 0.05% or Monocrotophos 36 EC @ 0.04 % on a non rainy day.
- Continue transplanting of cauliflower and knoll-khol with seed rate of 500g and 250 g respectively in Jammu division and sowing of onion in Kashmir division.
- Continue land preparation and sowing of wheat in Kashmir division. Adopt 100 kg/ha seeds for sowing. Apply 40kg N, 60kg P2O5 and 40kg K2O as basal on a non rainy day.
- Sowing of normal sown wheat varieties (HD-2329, CPAN-3004, Raj-3077, PBW-343, RSP-303, WH-542 -& PBW-154) under irrigated condition and PBW396, RSP81, IWP-72 & PBW-175 under rainfed condition with seed rate 100 kg/ha can be done during this period in Jammu division.
- Prepare land for sowing of gobi sarson crop (varieties: GSL-I, DGS-I) and gram (var: C-235, K-468, Gourav and PBG-I) crop in Jammu division in irrigated as well as rainfed areas.
- Continue harvesting of matured fruit crops and maize on bright sunny days in Jammu division and pea, lentil, chickpea etc. in Kashmir division.

#### Delhi

- Very light rain occurred on 3rd December at a few places. Weather remained mainly dry on rest of days.
- Mainly dry weather is likely over the State.

- As there was no rainfall in the State during last few weeks and mainly dry weather is likely over the State for the next three days, apply irrigation to vegetables, mustard, gram, barley and wheat.
- Prepare land and undertake transplanting of 5 6 weeks old seedlings of cauliflower, cabbage and knoll khol in the main field.
- Continue sowing varieties like Pusa Himani for raddish.
- Prepare field and undertake sowing of wheat. It is recommended to sow late varieties like UP 2338, HD 2285, HD 2687, HD 2428, Raj 3077, Raj 3765, PBW-226, PBW-373 etc. Adopt seed rate of 125 150 kg / ha. Sow seeds in line keeping distance between lines of 15 20 cm. Treat the seeds with 2-3 g Bavistin 50 WP / kg to avoid the spread of kadwa disease.

## Southern Region (AP, Tamilnadu, Karnataka and Kerala)

#### Kerala

- Dry weather prevailed over the State during this period.
- Isolated rain / thundershowers are likely over the State.

#### Advisories

- As there was no significant rainfall in most of the districts during last week and isolated rain / thundershowers are likely over the State for the next three days, apply irrigation to plantation crops viz., coconut, arecanut, rubber and banana.
- Continue intercultural operations, application of fertilizers and pesticides in plantation crops.
- Attack of rhinoceros beetle and leaf rot is reported in coconut. Fill the leaf axils with Sevidol 8G @ 25 gm mixed with 200 gm fine sand to control rhinoceros beelte. In the leaf rot affected plants, remove the rotten parts from the spear and the two adjacent leaves and pour 300 ml fungicidal solution at the base of the spear which can be prepared by mixing Hexaconazole @ 5 EC 2 ml or Mancozeb @ 3 gm in 300 ml of water.
- Attack of pink disease is reported in rubber. Clean the affected portion and apply Bordeaux paste @ 1%.
- Harvest the matured *mundakan* rice crops in bright sunny days. Nursery raising and land preparation may be started for *puncha* rice crop in areas where *mundakan* crop is harvested.

#### Tamilnadu

- Rainfall occurred at a few places over North Coastal Tamilnadu, at one or two places over rest Tamilnadu on 4th December 2007 and at one or two places over Tamilnadu on 3rd, 5th December 2007.
- Rain/thundershowers are likely at few places over north Tamilnadu and isolated over south Tamilnadu.

- As there was no significant rainfall during last week and rain/thunder showers are likely to occur at a few places over north Tamilnadu and isolated over south Tamilnadu for the next three days, apply irrigation to sugarcane and early sown maize, groundnut, black gram, green gram and pulses.
- The present cloudy weather is congenial for diseases like bacterial leaf blight (BLB) and blast in the current samba and *Thaladi* rice crops. To control the diseases spray Carbendazim @ 100g or Ediphenphos @ 200 ml or Tricyclozole @ 200g by mixing with 200litre of water using the hand sprayer.
- Monitor maize for stem borer and aphids and if the pests population crosses ETL, spray Carbaryl 50% WP @ 400 g/acre to control the pest.
- Continue sowing of rainfed groundnut, black gram, green gram and red gram. Use 112 kg pods/ha for groundnut and 20 kg/ha for pulse crops.
- Continue sowing rainfed millet crops like jowar, bajra and samai. Undertake seed treatment with Azospirillum before sowing.
- Continue picking matured cotton bolls on bright sunny days. Picking may be done at early morning hours to maintain quality of kapas.
- Undertake land preparation and sowing of coriander in the main field in southern region. Adopt 5 kg seeds / ac in the spacing of 20 x 15 cm under irrigated condition. If rainfed crop, seed rate @ 10 kg/ac has to be broadcasted evenly. Apply Urea @ 9 kg/ac, super phospahte@ 100 kg/ac and potash @ 13 kg/ac as basal for both rainfed and irrigated condition.

#### Karnataka

- Rainfall occurred at isolated places over South Interior Karnataka and mainly dry weather prevailed over Coastal Karnataka and North Interior Karnataka on 5th December. Mainly dry weather prevailed over South Interior Karnataka and dry weather prevailed over Coastal Karnataka and North Interior Karnataka on 4th December. Dry weather prevailed over the State on 3rd December.
- Isolated rain/thundershowers are likely over South Interior Karnataka and mainly dry weather is likely over rest region of the State.

#### Advisories

- As there was no significant rainfall during last week and isolated rain/thundershowers are likely over South Interior Karnataka and mainly dry weather is likely over rest region of the State for the next three days, apply irrigation to sugarcane, *rabi* jowar, maize, cotton and sunflower.
- Undertake propping of sugarcane to prevent the crop from lodging.
- Undertake intercultural operation in *rabi* crops like maize, jowar, sunflower and cotton.
- Monitor *rabi* sunflower for powdery mildew and undertake spraying of Wettable Sulphur @ 3 g/litre of water, if required.

#### Andhra Pradesh

- Isolated rain occurred over Coastal Andhra Pradesh on 3rd December and over Rayalaseema on 4th & 5th December. Dry weather prevailed elsewhere over the State during the week.
- Rain/thundershowers are likely at a few places over Rayalaseema and mainly dry weather is likely over rest region of the State.

#### Advisories

- As there was no significant rainfall over the State during last week and rain/thundershowers are likely at a few places over Rayalaseema and mainly dry weather is likely over rest region of the State for the next three days, apply irrigation to red gram and chillies.
- Complete harvesting groundnut and continue harvesting rice.
- Continue picking cotton.
- Monitor red gram for *Helicoverpa* and if the pest population crosses ETL, spray NSKE @ 5% to control egg and early instar larvae. To control adults, install bird perches @ 10-15 nos/acre. Arrange pheromone traps @ 4 per acre.
- The incidence of thrips, dieback, leaf spot, blight and powdery mildew is noticed in chillies. To control thrips, spray Fipronil @ 2.0 ml per litre of water. To control dieback, spray Captan @ 1.5 g per litre of water. To control leaf spot, spray Mancozeb @ 2.5 g or Carbendazim @ 1 g per litre of water. To control blight, spray Plantamycin or Poustamycin @ 0.2g or Streptomycin @ 0.1g + Copper oxychloride @ 3g per litre of water 2-3 times at 15 days interval. To control powdery mildew, spray Wettable Sulphur @ 3.0 g per litre of water.
- The deficiency of Zinc and Boron is noticed in chillies. The prevailing low temperature further hastens the deficiency. To correct zinc deficiency, spray ZnSo4 @ 2g per litre of water. To correct boron deficiency, spray Borax @ 1.5 g per litre of water.
- Application of fertilizers, pesticides and intercultural operations may be done on a non rainy day in Rayalaseema.

### Eastern Region (Assam, Arunachal Pradesh, Bihar, Jharkhand, Sikkim, West Bengal)

Assam

- Light to moderate rain occurred at a few places on 4th, very light rain at isolated places on 5th December and dry weather prevailed over the state on 3rd December.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no significant rain in the State during last week and mainly dry weather is likely over the State for next three days, apply irrigation to arhar, winter vegetables, other *rabi* crops and wheat (at crown root initiation stage).
- Harvest already matured *Sali* rice crops and black gram and green gram on bright sunny days.
- Continue harvesting of matured crops of sugarcane. Red rot infested sugarcane may be harvested early and the field should be newly planted. Ratooning of infested plant should be discarded.
- Prepare land for early varieties of winter vegetables such as spinach, reddish & corainder etc. and seeds of hybrid varieties of tomato, brinjal, capsicum, cauliflower and cabbage etc. may be collected from reputed sources and should be sown in the seed bed for raising seedling for planting in the main fields.
- Prepare land and continue sowing of wheat. Wheat may be sown up to 1st week of December. Select varieties from Sonalika, PBW, UP-262 etc. Adopt seed rate of 16 kg / bigha.
- Incidence of aphids and saw fly was noticed in mustard and rapeseed in few localities.
- Monitor mustard and rapeseed for aphids and saw fly and if the population exceeds economic threshold level, apply Rogor or Malathion @ 2 ml / litre of water to control the disease.

#### **Arunachal Pradesh**

- Rain / Thundershowers occurred at a few places on 4th December and weather remained mainly dry on other days of the period.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no significant rainfall in most the districts and mainly dry weather is likely for the next three days, apply irrigation to wheat, potato and mustard. Postpone irrigation in Tirap and Upper Subansiri districts as there was sufficient rainfall during last week.
- Harvest the matured crops of ginger, millet, wet seeded rice and *Jhum* rice.
- Apply first top dressing (33 kg Urea/ha) in potato.
- Undertake weeding and hoeing in pea, wheat, mustard and *rabi* maize to keep the field weed free.

#### Bihar

- Weather was mainly dry.
- Mainly dry weather is likely over the State.

- As there was no rainfall in the State during last two weeks and mainly dry weather is likely over the State for the next three days, apply irrigation to the arhar, fodder maize and sugarcane.
- Continue sowing of raddish, spinach, carrot, gram and lentil .
- Continue harvesting of the matured crops of rice.
- Continue field preparation and sowing of rai and linseed. Use certified seed of rai variety Rajendra Pichheti, Rajendra Annkul & Suphlam and linseed variety 397, Shubhra, Garima and Sweta.

• Continue field preparation and sowing of timely sown wheat in irrigated areas. Select varieties like HD 2733, HP 1761, K9107, HUW 468, PBW 443, PBW 343, RW 346, RW 234, RW 3413 and UP 262. Use seed rate @ 125 Kg/ha.

#### Jharkhand

- Weather remained mainly dry.
- Mainly dry weather is likely over the State.

#### Advisories

- Apply irrigation to vegetables as there was no significant rainfall during last few weeks and mainly dry weather is likely over the State for the next three days.
- Earthing up and top dressing of urea (125 kg/hectare) may be done in early sown potato.
- Continue field preparation and sowing of wheat. Sow varieties like HD-2733, HD 2402, HUW 468, PBW 343, NW- 1012, K8804, K9107 etc. in irrigated conditions and C 306, K 8027, HDR 77, K8962 for rainfed conditions.

#### Sikkim

- Sky remained generally cloudy during the period. Light rain occurred at few places on 4th and very light rain occurred at one or two places on 29th November. Weather was mainly dry over East Sikkim during rest of the days. Rain fall was excess over East Sikkim during the period.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no significant rainfall during last week and mainly dry weather is likely over the State, for the next three days, apply irrigation to *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root.
- Continue harvesting of ginger and orange.
- Undertake intercultural operations and application of fertilizers in *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root.
- Continue land preparation and sowing wheat. Use certified seeds for sowing.

#### West Bengal

- Light to moderate rain occurred at few places on 4th December over Sub Himalayan West Bengal. Weather was mainly dry during the rest period over the districts of West Bengal.
- Mainly dry weather is likely to prevail over West Bengal State.

- As there was no significant rainfall in the State during last week and mainly dry weather is likely to prevail for next three days, apply irrigation to sugarcane and arhar and already sown *rabi* crops like mustard, rapeseed, wheat, gram, lentil, *rabi* arhar, potato and sunflower.
- Continue harvesting of already matured *aman* rice crops on bright sunny days.
- Keep vigil against late blight disease of potato. Uproot and burn the affected plants. Apply Dimethoate 30% @ 2 ml / litre of water in the remaining healthy plants.
- Prepare land and continue sowing of wheat and *rabi* arhar and planting of potato.
- Continue preparation of land and sowing of sunflower. Apply 8 10 tonnes of organic matter along with 30 kg N, 80 kg P<sub>2</sub>O<sub>5</sub> and 35 kg K<sub>2</sub>O as a basal dose in irrigated areas. In non-irrigated areas the dose will be 20 kg N, 60 kg P<sub>2</sub>O<sub>5</sub> and 35 K<sub>2</sub>O. Select hybrid varieties from Surya-51, Pack-36 and M.S.F.H-17 from sowing. Adopt seed rate of 3.5 to 4 kg / ha. Treat the seeds with Thiram @ 3g / kg of seeds.

## Central Region (Gujarat, Chhattisgarh, Maharashtra, MP& Orissa)

#### Gujarat

• Dry weather prevailed over the State. Mainly dry weather is likely to prevail over the State.

#### Advisories

- As there was no significant rain during last few weeks over the State and mainly dry weather is likely to prevail over the State for next three days, apply irrigation to sugarcane, *kharif* cotton and castor and early sown mustard and wheat.
- Stop irrigation 10 15 days before harvesting of sugarcane. Start harvesting the crop when brix reading of sugarcane will be 19 or more.
- In some places cotton crop is infested with mealy bug. Monitor the crop for mealy bug and if damage exceeds ETL, to control the pest spray Methyl dimeton 25 EC @ 10 ml or Phosphamidon 85 EC @ 5 ml or Dimethoate 30 EC @ 10 ml in 10 liters of water.
- Prepare land for sowing of wheat by one harrowing and ploughing with application of FYM
   @ 10 15 MT before ploughing. Apply 60 kg N and 60 kg P<sub>2</sub>O<sub>5</sub> as basal dose at the time of sowing for irrigated crops and 20 kg N / ha for rainfed crops. Select varieties from Lok-1, GW-190, GW-496, 503, 273, 322, Raj 1555 for timely sown irrigated crops, Lok-1 and GW-173 for late sown irrigated crops and GW-1 and A-206 for rainfed crops.

#### Chhattisgarh

- Weather was mainly dry in all divisions of the State.
- Mainly dry weather is likely to prevail over the State.

#### Advisories

- As there was no rainfall during last week in the State and mainly dry weather is likely over the State for next three days, apply irrigation to sugarcane, toria and vegetables and early sown rapeseed, mustard and niger.
- Harvest the already matured kharif rice crops on bright sunny days. Sowing of gram, safflower, green gram, linseed and lathyrus may be undertaken before harvesting of rice in wet field as utera crop.
- Transplanting of seedlings of tomato, brinjal, chilli, cauliflower etc. in the main fields may be continued in the afternoon to avoid the mortality of seedlings.
- Prepare land for sowing of wheat and rabi crops. Treat the seeds with thirum @ 3 g or bavistin @ 2 g / kg of seeds. Seeds of pulse crops may be treated with rizobium culture.
- Prepare land for plating of potato. Select varieties from kufri badsha, Kufri Jyoti, Kufri Bahar etc. Before planting treat the seeds by dipping them for 30 minutes in solution of thyrum @ 3 g or bavistin @ 2 g / litre of water.
- Start planting of *autumn* sugarcane. Plant autumn sugarcane before 15th December. Top 1/3rd portion of the cane free from red rot disease should be used for planting purpose. Before planting the seeds should be dipped for 15 minutes in the solution of Copper Oxychloride or Emisan @ 2 or 3 gm per liter of water.

#### Maharashtra

- Mainly dry weather prevailed over the State.
- Mainly dry weather is likely over the State.

#### Advisories

• As there was no significant rain in the State during last week & mainly dry weather is likely over the State during next three days, apply irrigation to sugarcane (Pre-seasonal), sugarcane (suru), kharif tur, rabi jowar, safflower, potato, gram, wheat and maize.

- Apply 50 kg Nitrogen/ha to black soil, 40 kg/ha to medium & 25 kg Nitrogen/ha to low fertile soil after 25 to 30 days from sowing of *rabi* jowar.
- Apply 35 kg Nitrogen/ha after 30 days from sowing of safflower at the time of first irrigation.
- Second dose of 50 kg Nitrogen / ha may be applied to potato as top dressing after weeding.
- Apply second dose of 60 kg Nitrogen / ha at 30 days after sowing of wheat.
- Mild incidence of white woolly aphids in Kolhapur division in Sugarcane (pre-seasonal) & sugarcane (Suru), boll warm in Nagpur division in *kharif* cotton and irrigated cotton and pod borer in Nashik, Pune, Aurangabad, Latur and Amravati division in *kharif* tur is reported.
- Monitor the Sugarcane (pre-seasonal) & sugarcane (Suru) for White Woolly Aphids & if exceeds economic threshold level, for effective control spray 500 ml Endosulphan 35%+ Metasystox 1000 ml & 500 ml Sticker or 500 gm detergent powder / ha in 500 liters of water. For the biological control of White Woolly Aphids, release 25000 larvae of *Chrysoperla carnea* or *Dipha aphidivora* / ha as predator after 15 days from the above dose.
- For the control of boll warm in cotton adopt integrated pests management method. Monitor the crop for same & if exceeds economic threshold level, spray 36 % WSC Monocrotophos @ 850 ml or 25 % WSC Quinolphos @ 1000 ml / ha in 500 liters water wherever crop is at boll formation stage.
- Monitor the crop for pod borer in tur & if exceeds economic threshold level, first spray 250 diseased larvae of Nuclear poly hydrosis virus followed by 35 EC Endosulphan 1000 ml/ha in 500 liters water 3 times by 15 days interval.
- This is the proper time for planting of onion. For plantating N-2-4-1, Pusa red, Arka niketan, for export Phule suvarna & for onion powder Agri found white-1, Phule safed, N-257-9-1 varieties may be selected. Apply Nitrogen, Phosphorus & Potash 50 kg each / ha before planting. Prepare plane beds of Suitable size & plantation may be done at 12.5 X 7.5 cm distance & 4.5 cm depth. Flood irrigation may be given 24 hours before the transplanting of seedlings. Plant seedlings of 0.5 cm base diameter. Seedling roots may be dipped in 1 % Urea & apex in Monocrotophos 12.5ml + DaithenM-45, 25 gm in 10 liters solution followed by solution of 4 packets of Azotobacter in 10 liters before planting.

#### Madhya Pradesh

- Rainfall occured at isolated places in North M.P on 3rd December, dry weather prevailed over the state for remaining period.
- Mainly dry weather is likely over the State.

- As dry weather prevailed during last week in the state and likely to prevail for the next three days, apply irrigation to sugarcane and also to linseed, lentil, gram, mustard and wheat wherever the crops are at vegetative stage.
- Undertake intercultural operation in sugarcane and other *rabi* crops to keep the field weed free.
- Continue picking of cotton on bright sunny days.
- Prepare land and complete sowing of irrigated wheat by second week of December. Undertake seed treatment with the mixture of 1 gm of carbendazim and 2 g Thiram before sowing. Select varieties from Navin Chandosi (H.I.1418), Vidisha (D.L.-788/2), G.W.-173, Aabha (H.I.-1454) for irrigated wheat.
- Undertake nursery sowing of cabbage, cauliflower and onion. If seedlings are at proper age, transplanting in the main field may be started.
- Undertake sowing of coriander, spinach and methi in the main field.
- Continue land preparation and sowing of pea (Arkel). Undertake seed treatment with Vebistene @ 2.0 g per kg of seed before sowing.

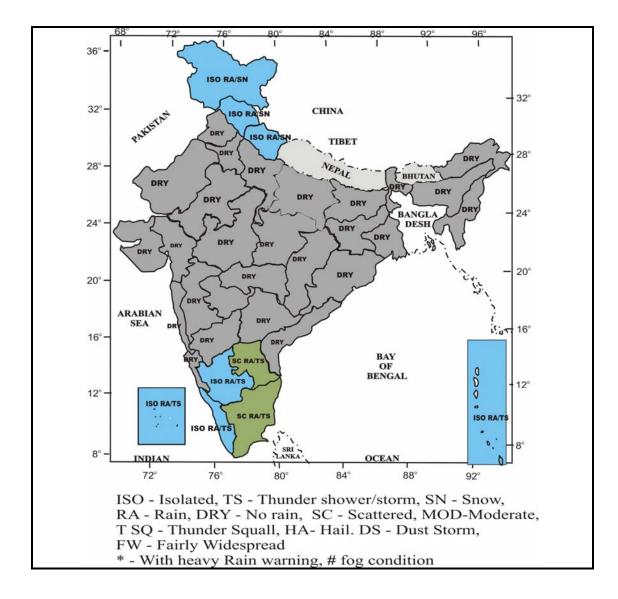
• Continue land preparation and planting of berseem for green fodder.

#### Orissa

- Weather has been dry over the State during the period.
- Mainly dry weather is likely to prevail over the State.

#### Advisories

- As there was no significant rainfall over the State during last few weeks and mainly dry weather is likely to prevail over the State for the next three days, apply irrigation to vegetables, sugarcane and pulse crops.
- Harvest the matured crops of rice.
- Complete field preparation and sowing of mustard. Sow irrigated mustard variety Parvati, Anuradha, P.T.303, Pusa agrani etc. using 3 to 4 kg of seed per acre. Treat the seed with Carbendazim @ 1.5 gm/kg of seed or 3gm Thiram @ 3gm/kg of seed. Apply 12kg N, 12 kg P, and 12 kg K per acre as basal fertilizer. Maintain a spacing of 30x10 cm.
- Complete field preparation and sowing of groundnut and sunflower. Select groundnut variety like A.K.1224 or Smruti and maintain a spacing of 30x10 cm. Select sunflower variety Morden or Sunrise or hybrid like KBSH 1 or KBSH 3. Use 4kg seed for variety and 2 kg seed for hybrid per acre. Apply 8kg N, 16kg P and 12kg K for variety per acre and for hybrid twice the quantity per acre.



## Forecast Valid upto 9<sup>th</sup>December 07

# Salient weather features for the week ending 5/12/07

#### METEOROLOGICAL ANALYSIS

- Last week's upper air trough extending from Nagaland & Manipur to Sub-Himalayan West Bengal & Sikkim in the lower tropospheric levels persisted on 29th November and became less marked on 30th.
- Weak easterly waves sometimes with embedded cyclonic circulations at lower tropospheric levels passed through Andaman & Nicobar Islands, South Bay of Bengal, extreme south peninsula and southeast Arabian Sea during the week.
- A western disturbance as an upper air system lay over north Pakistan & neighbourhood on 29th, over Jammu & Kashmir & neighbourhood during 30th November to 2nd December and moved away eastward thereafter.
- An upper air cyclonic circulations in lower tropospheric levels lay over north Pakistan & neighbourhood on 4th and over Jammu & Kashmir and neighbourhood on 5th December.
- An upper air cyclonic circulations in lower tropospheric levels lay over Assam & neighbourhood during 30th November to 3rd December and moved away eastwards on 4th.

#### RAINFALL

Under the influence of the above systems:

- Isolated to scattered rain/thundershowers occurred over coastal Tamil Nadu during many days of the week.
- Isolated rain/thundershowers occurred over Kerala on 29th.
- Isolated rain/thundershowers occurred over northeastern States on a few days of the week.
- Isolated to scattered rain/thundershowers occurred over Punjab, Jammu & Kashmir and Himachal Pradesh on 29th & 30th November, over Haryana, northwest Madhya Pradesh and West Uttar Pradesh on 2nd December.
- Mainly dry weather prevailed over remaining parts of the country during the week.

#### MINIMUM TEMPERATURE

- The minimum temperatures were below normal by 2-3°C over Jammu & Kashmir, Himachal Pradesh and Uttarakhand on many days of the week.
- They were above normal by 3-7°C over Rajasthan and by 2-4°C over West Uttar Pradesh, Haryana, northwest Madhya Pradesh, West Bengal, Gujarat Region, Maharashtra and northeastern states on many days of the week.
- They were below normal by 2-4 °C over Chhattisgarh, remaining parts of Madhya Pradesh, Jharkhand, Interior Karnataka on a few days of the week.
- They were below normal by 2-3 °C during the first half of the week and above normal by 2°C during the second half of the week over Andhra Pradesh.
- They were near normal over remaining parts of the country during the week.

#### RAINFALL DURING THE WEEK (FOR THE WEEK ENDING ON 5<sup>™</sup> DECEMBER, 2007)

Rainfall was excess/normal in 5, deficient/scanty in 14 and no rain in 17 out of 36 meteorological sub-divisions (Actual: 1.4 mm, Normal: 4.5 mm and Departure: -69 %).

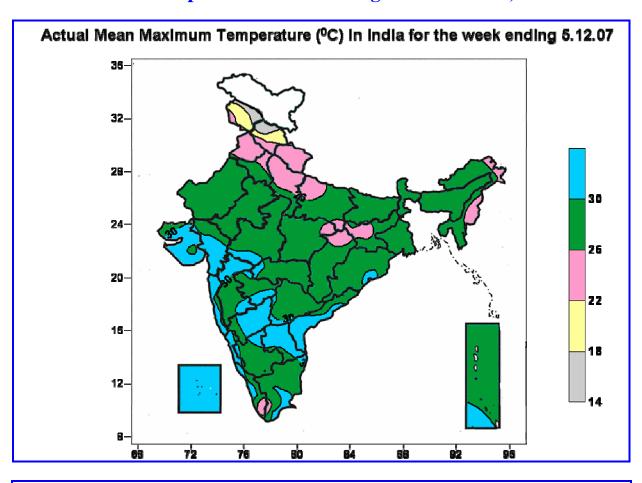
#### CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> OCTOBER TO 5<sup>TH</sup> DECEMBER, 2007)

Rainfall was excess/normal in 10 and deficient/scanty in 26 out of 36 meteorological subdivisions. (Actual: 70.9 mm, Normal: 111.2 mm and Departure: -36%).

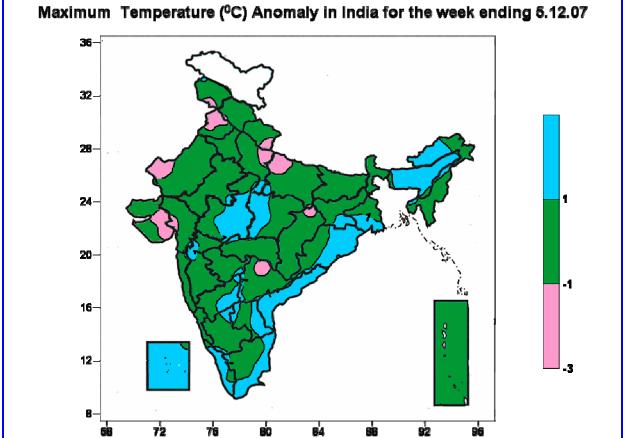
#### OUTLOOK FOR THE WEEK ENDING ON 12<sup>™</sup> DECEMBER, 2007.

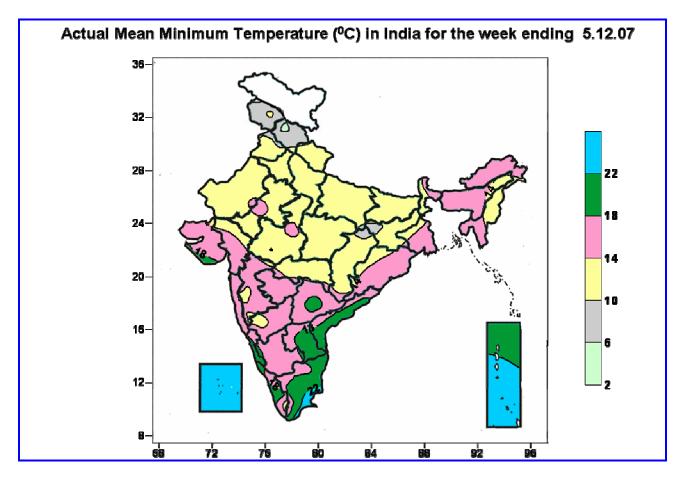
- Isolated to scattered rain/thundershowers are likely over extreme south peninsula.
- Under the influence two western disturbances, isolated to scattered precipitation is likely over western Himalayan Region and adjoining northern plains during the week.

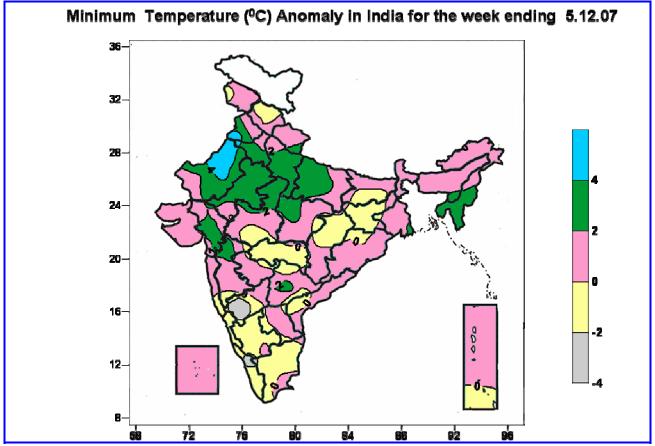
• No significant change in night temperatures during first half of the week and rise in night temperatures by 2-3°C during second half of the week is likely over plains of northwest & adjoining central India.

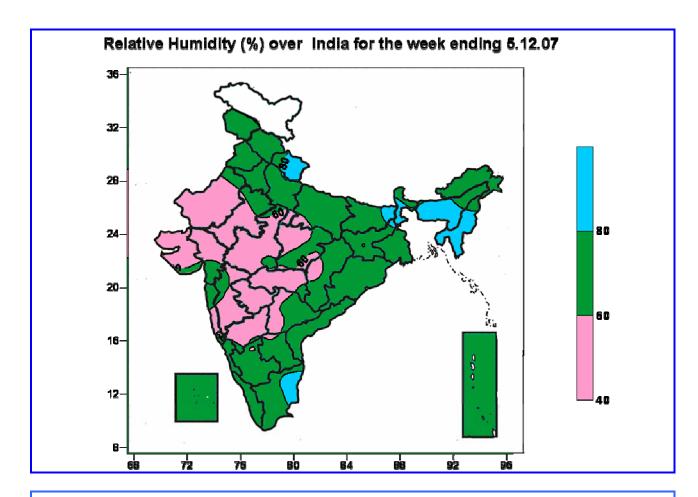


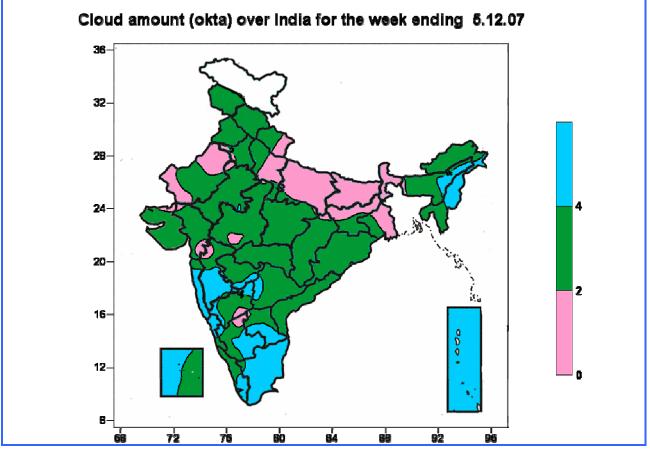


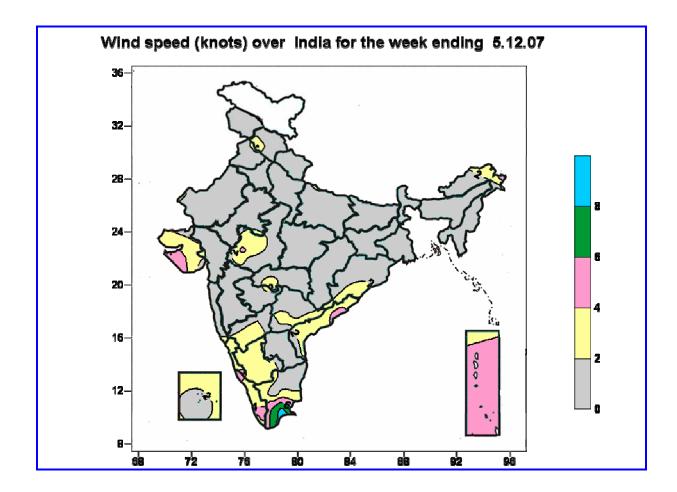














Under the prevailing weather conditions, there is no chance of locust infestation in Rajasthan and the adjoining areas during this week.

### CROP-STATE-STAGE

Vegetables	Early sown vegetables	Mustard	Berseem	Wheat	
Sowing/Transplanting	Vegetative	Vegetative	Vegetative	Sowing	
Gram	Barley	Early sown wheat			
Vegetative	Vegetative	Early vegetative / crown root initiation			
		Haryana			
Sugarcane / Autumn sugarcane	Horticultural crops	Cotton	Cabbage, pea, garlic, potato	Toria	
Vegetative / early vegetative	Vegetative	Picking	Sowing	Flowering / fruiting	
Rabi oilseeds	Wheat	Rabi Pulses			
Early vegetative / vegetative	Sowing	Seedling / early vegetative			

Vegetative/head formation Ladies finger - Flowering/FuitingSowingNew planningVegetativeLadies finger - sowing ermination / early vegetative / crown root initiationVegetable cropsRicePulses / wheat / brown sarsunMustard, gub sarsonBarley, OatSowing / transplantingHarvesting - Jammu div, sowing / Jammu div, sowing / sowing / and preparation for sowing / Jammu div,Mustard, gub sarsonBarley, OatSugarcaneHotricultural cropRabi pulsesCotionCabbage / garlie / peal / plataVegetativeVegetativeSeeding / early vegetativeNickingSowingVegetativeVegetativeSeeding / early vegetativeFlorey / PotatoFlorey / / plataWheatAutumn sugarcaneRabi crops/Mustard, Barley, stramint, gram)Early vegetativePotatoSowingGerminationSowingGerminationSowingPotatoSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingGerminationPlantingSowingGerminationSowingIntervestingFloreyringSo	Vegetables (Ladies finger/ Cabbage, Cauliflower)	Potato	Apple	Toria	Wheat / Barley / Gram / Oil seeds
Vegetable crops         Rice         Pulses / wheat / brown sarsum         Mustard, gobe sarsum         Barley, Oat           Sowing / transplanting         Harvesting- Jammu div.         Land preparation for sowing         Cotton         Cotton         Cotton         Cotton         Farly sown rabi crops         Farly sown rabi crops         Potato           Sowing         Germination         Sowing         Germination         Sowing         Germination         Sowing         Farly sown rabi crops         Potato           Sowing         Germination         Sowing         Germination         Sowing         Germination         Farly sown rabi crops         Potato           Sowing         Germination         Sowing         Harvesting         Harvesting         Horticrups           Sowing         Germination         Sowing         Vegetative         Winter vegetables	Vegetative/ head formation Ladies finger	Ŭ	r c	Vegetative	sowing Early sown crops – germination / early vegetative / crown
Vegetable crops         Kice         brown sarsun         sarson         Barley, Oat           Sowing / transplanting         Harvesting - Jammu div.         Land preparation for sowing in Jammu div.         Land preparation for sowing           Vegetative         Vegetative         Vegetative         Sowing         Cotton         Cabbage / garlic / pea / potato           Vegetative         Vegetative         Vegetative         Ficking         Sowing         Sowing         Flowering / fruiting           Wheat         Early sown wheat         Rajesthan         Early sown rabi grann)         Early sown rabi grann)         Potato           Sowing         Germination         Sowing         Germination         Sowing         Flowering / fruiting / maturity         Potato           Sugarcane         Kharif Vegetables         Winet vegetables         Rice         Toria           Sugarcane         Kharif Vegetables         Weetat         Rai mustard         Mango / formation           Flowering / fruiti			Jammu & Kashmir		
Sowing / transplanting     Harvesting - Jammu div.     Panipab     sowing in Jammu div.     Sowing in Jammu div.       Sugarcane     Horticultural crop     Rabi pulses     Cotton     Cabbage / gartic / pea / potato       Vegetative     Vegetative     Seedling / early vegetative     Picking     Sowing       Wheat     Autumn sugarcane     Rabi Oliseeds     Irrigated toria       Barly vegetative     Germination     Early vegetative     Vegetative       Wheat     Cutum sugarcane     Rabi Oliseeds     Irrigated toria       Sowing     Germination     Sowing     Early vegetative     Flowering / fruiting       Wheat     Early sown wheat     Rajesthan     Early sown rabi erops (Mustard, Barley, taramina, gram)     Potato       Sowing     Germination     Sowing     Germination     Potato       Sprouting     Germination     Sowing     Germination     Potato       Sugarcane     Kharif Vegetables     Winet vegetables     Rice     Toria       Sugarcane     Kharif Vegetables     Vegetative / flowering     Late Harvesting     Flowering / pod formation       Field preparation & Seedling     Seedling     Early vegetative     Vegetative     Vegetative       Pea     Toria     Sugarcane     Potato     Margo       Field preparation & Sowing	Vegetable crops	Rice	, 9		Barley, Oat
Sugarcane         Horticultural crop         Rabi pulses         Cotton         Cabbage / garlic / peat/ / potato           Vegetative         Vegetative         Seedling / early vegetative         Picking         Sowing           Wheat         Autumn sugarcane         Rabi Oilseeds         Irrigated foria           Germination         Early vegetative         Farly segetative / vegetative         Flowering / fruiting           Wheat         Early sown potato         Germination         Sowing         Germination           Sowing         Germination         Sowing         Germination         Potato           Sowing         Germination         Sowing         Germination         Potato           Sowing         Germination         Sowing         Germination         Potato           Sprouting         Picking         Harvesting         Flowering / fruiting / matrity         Winter vegetables         Rice         Toria           Sugarcane         Kharif Vegetables         Winter vegetables         Rai mustard         Margo           Field preparation & sowing         Seedling         Early vegetative         Early vegetative         Vegetative           Vegetative         Seedling         Early vegetative         Kharif Rice         Margo           Field preparatio	Sowing / transplanting	Harvesting- Jammu div.		sowing in Jammu	
Sugarcane         Horitentutina crop         Kata pusses         Cotion         7 potato           Vegetative         Vegetative         Seedling / early vegetative         Picking         Sowing           Wheat         Autumn sugarcane         Rabi Oilseeds         Irrigated toria           Germination         Early vegetative         Party vegetative / vegetative         Flowering / fruiting           Wheat         Early sown wheat         Rabi crops(Mustard, Barley, faramira, gram)         Early sown rabi crops         Potato           Sowing         Germination         Sowing         Germination         Planting           Sowing         Octoon         Guar         Intervention         Planting           Sugarcane         Khar/ Vegetables         Winter vegetables         Rice         Toria           Sugarcane         Khar/ Vegetables         Winter vegetables         Rai, mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Early vegetative         Vegetative           Pea         Toria         Sugarcane         Potato         Kharif Rice           Field preparation & sowing         Seedling         Care maturity         Maturity         Maturity           Maturity         Vegetative         Seedling			Punjab		
Vegetative         Vegetative         Vegetative         Picking         Jowing           Wheat         Autumn sugarcane         Rabi Oilseeds         Irrigated toria           Germination         Early vegetative         Early vegetative/ vegetative         Flowering / fruiting           Wheat         Early sown wheat         Rabi crops(Mustard, Barley, taramira, gram)         Early sown rabi crops         Potato           Sowing         Germination         Sowing         Germination         Planting           Sowing         Germination         Sowing         Germination         Planting           Sowing         Germination         Sowing         Germination         Planting           Early sown potato         Cotton         Guar         -         -           Strouting         Picking         Harvesting         Flowering / Potato         Flowering / Potato           Cane maturity         Flowering / fruiting / maturity         Vegetative         Rabi pulses         Rai, mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Vegetative         Vegetative           Field preparation & sowing         Seedling / crown root initiation         Maturity         Mago         Harvesting           Finger Millet/ Amranthus </td <td>Sugarcane</td> <td>Horticultural crop</td> <td>Rabi pulses</td> <td>Cotton</td> <td></td>	Sugarcane	Horticultural crop	Rabi pulses	Cotton	
Wheat     Autumn sugarcane     Rabi Oilseeds     Irrigated toria       Germination     Early vegetative     Early vegetative/ vegetative/ vegetative/ vegetative/ vegetative/ vegetative/ vegetative/ vegetative/ vegetative/ vegetative/     Flowering / fruiting       Wheat     Early sown wheat     Rabi crops(Mustard, Barley, taramira, gram)     Early sown rabi crops     Potato       Sowing     Germination     Sowing     Germination     Planting       Early sown potato     Cotton     Guar     -       Sprouting     Picking     Harvesting     -       Sugarcane     Kharif Vegetables     Winter vegetables     Rice     Toria       Sugarcane     Kharif Vegetables     Winter vegetables     Rai     Flowering / pod formation       Wheat     Early sown wheat     Rabi pulses     Rai, mustard     Mango       Field preparation & sowing     Seedling     Early vegetative     Early vegetative     Vegetative       Vegetative     Seedling     Early vegetative     Early vegetative     Vegetative       Pea     Toria     Sugarcane     Potato     Kharif Rice       Pod formation     Pod formation / maturity     Maturity     Tuber growth     Harvesting       Hinger Millet/ Anranthus     Mango/Litchi     Wheat     Sali rice     Black Gram & Green Gram       Land	Vegetative	Vegetative		Picking	Sowing
Operation         Early vegetative         vegetative         Provening / Induing           Wheat         Early sown wheat         Rabit crops(Mustard, Barley, taramira, gram)         Early sown rabit crops         Potato           Sowing         Germination         Sowing         Germination         Planting           Sowing         Germination         Sowing         Germination         Planting           Sowing         Germination         Gaar         Image: Sowing         Planting           Sugarcane         Kharif Vegetables         Winter vegetables         Rice         Toria           Sugarcane         Kharif Vegetables         Winter vegetables         Rice         Toria           Sugarcane         Kharif Vegetables         Winter vegetables         Rai, mustard         Mango           Wheat         Early sown wheat         Rabi pulses         Rai, mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Early sown         Vegetative           Vegetative         Mango/Litchi         Wheat         Harvesting         Harvesting           Finger Millet/ Amranthus         Mango/Litchi         Wheat         Sali rice         Black Gram & Green Gram           Maturity         Vegetative         See		Wheat	Ŭ	Rabi Oilseeds	Irrigated toria
RajasthanWheatEarly sown wheatRabi crops(Mustard, Barley, taramira, gram)Early sown rabi cropsPotatoSowingGerminationSowingGerminationPlantingEarly sown potatoCottonGuaImage: CorpsPlantingSproutingPickingHarvestingImage: CorpsPlantingSugarcaneKharlf VegetablesWinter vegetablesRiceToriaSugarcaneKharlf VegetablesWinter vegetablesRiceToriaCane maturityFlowering / fruiting / maturityVegetative / floweringLate HarvestingFlowering / pod formationWheatEarly sown wheatRabi pulsesRai , mustardMangoField preparation & sowingSeedlingEarly vegetativeEarly vegetativeVegetativePod formationPod formation / maturityMaturityTuber growthHarvestingFinger Millet/ AmranthusMango/LitchiWheatSeedling / crown root initiationBlack Gram & Green GramMaturityVegetativeSeedling / crown root initiationPod maturity / harvestingPod maturity / harvestingWinter vegetablesSugarcaneArharSali riceBlack Gram & Green GramLand preparation & sowing / rossingGermination / crown root initiationPod maturity / harvestingLand preparation & sowing / rossingGermination / crown root initiationPlantingearly vegetative / vegetative / vegetativeLand preparation & sowing		Germination	<u> </u>		
WheatEarly sown wheat gram)Barley, taramira, gram)Party sown rabic cropsPotatoSowingGerminationSowingGerminationPlantingEarly sown potatoCottonGuar			Rajasthan		
Sowing         Germination         Sowing         Germination         Planting           Early sown potato         Cotton         Guar	Wheat	Early sown wheat	Rabi crops(Mustard, Barley, taramira,	•	Potato
Early sown potato         Cotton         Guar           Sprouting         Picking         Harvesting           Uttar Pradesh         Uttar Pradesh           Sugarcane         Kharif Vegetables         Rice         Toria           Cane maturity         Flowering / fruiting / maturity         Vegetative / flowering         Late Harvesting         Flowering / pod formation           Wheat         Early sown wheat         Rabi pulses         Rai, mustard         Mango           Field preparation & Seedling         Early vegetative         Early vegetative         Vegetative         Vegetative           Pea         Toria         Sugarcane         Potato         Kharif Rice           Pod formation         Pod formation / maturity         Maturity         Tuber growth         Harvesting           FingerMillet/ Amranthus         Mango/Litchi         Wheat         Sali rice         Black Gram & Green Gram           Maturity         Vegetative         Seedling / crown root initiation         Maturity / harvesting         Pod maturity / harvesting           Unter vegetables         Sugarcane         Arhar         Sali rice         Black Gram & Green Gram           Land preparation & sowing / transplanting Early sown - early vegetative / vegetative         Harvesting         Flowering / pod formation         Pod ma	Sowing	Germination	0 /	Germination	Planting
Uttar Pradesh           Sugarcane         Kharif Vegetables         Winter vegetables         Rice         Toria           Cane maturity         Flowering / fruiting / maturity         Vegetative / flowering         Late Harvesting         Flowering / pod formation           Wheat         Early sown wheat         Rabi pulses         Rai, mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Early vegetative         Vegetative           Pea         Toria         Sugarcane         Potato         Kharif Rice           Pod formation / maturity         Maturity         Tuber growth         Harvesting           FingerMillet/ Amranthus         Mango/Litchi         Wheat         Sali rice         Black Gram & Green Gram           Maturity         Vegetative         Seedling / crown root initiation         Maturity / harvesting         Pod maturity / harvesting           Land preparation & sowing / transplanting Early sown – early vegetative / vegetative         Harvesting         Flowering / pod formation / crown         Maturity / harvesting         Pod maturity / harvesting           Rabi crops         Wheat         Early wheat         Horticultural plants         Pod maturity / harvesting           early vegetative / vegetative / vegetative         Land preparation & sowing         Germination / c	Early sown potato	Cotton	Guar		
Sugarcane         Kharif Vegetables         Winter vegetables         Rice         Toria           Cane maturity         Flowering / fruiting / maturity         Vegetative / flowering         Late Harvesting         Flowering / pod formation           Wheat         Early sown wheat         Rabi pulses         Rai , mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Early vegetative         Vegetative         Vegetative           Pea         Toria         Sugarcane         Potato         Kharif Rice           Pod formation         Pod formation / maturity         Maturity         Tuber growth         Harvesting           FingerMillet/ Amranthus         Mango/Litchi         Wheat         Harvesting         Harvesting           Maturity         Vegetative         Seedling / crown root initiation         Maturity         Vegetative         Seedling / crown root initiation           Maturity         Vegetative         Sugarcane         Arhar         Sali rice         Black Gram & Green Gram           Land preparation & sowing / transplanting Early sown – early vegetative / vegetative         Harvesting         Flowering / pod formation         Maturity / harvesting         Pod maturity / harvesting           early vegetative / vegetative / vegetative         Land preparation & sowing	Sprouting	Picking	Harvesting		
Sugarcane         Kharif Vegetables         Winter vegetables         Rice         Toria           Cane maturity         Flowering / fruiting / maturity         Vegetative / flowering         Late Harvesting         Flowering / pod formation           Wheat         Early sown wheat         Rabi pulses         Rai , mustard         Mango           Field preparation & sowing         Seedling         Early vegetative         Early vegetative         Vegetative           Vegetative         Seedling         Early vegetative         Early vegetative         Vegetative           Pea         Toria         Sugarcane         Potato         Kharif Rice           Pod formation         Pod formation / maturity         Maturity         Tuber growth         Harvesting           FingerMillet/ Amranthus         Mango/Litchi         Wheat         Harvesting         Harvesting           Maturity         Vegetative         Seedling / crown root initiation         Maturity / harvesting         Pod maturity / harvesting           Land preparation & sowing / transplanting Early sown - early vegetative / vegetative         Sugarcane         Arhar         Sali rice         Black Gram & Green Gram           Rabi crops         Wheat         Early wheat         Horticultural plants         Pod maturity / harvesting           early vegetative / veg			Uttar Pradesh		
Cane maturityFlowering / fruiting / maturityVegetative / floweringLate HarvestingFlowering / pod formationWheatEarly sown wheatRabi pulsesRai , mustardMangoField preparation & sowingSeedlingEarly vegetativeEarly vegetativeVegetativeVegetativeSeedlingEarly vegetativeEarly vegetativeVegetativePeaToriaSugarcanePotatoKharif RicePod formationPod formation / maturityMaturityTuber growthHarvestingFingerMillet/ AmranthusMango/LitchiWheatMaturityVegetativeSeedling / crown root initiationMaturityVegetativeSeedling / crown root initiationMaturityVegetativeSeedling / crown root initiationPod maturity / harvestingLand preparation & sowing / transplanting Early sown - early vegetativeHarvestingFlowering / pod formationPod maturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingPod maturity / harvestingearly vegetative / vegetative / vegetative / sowingWheatGermination / crown root initiationPlantingPotatowegetative / begetative / begetative / sowingHarvestingGermination / crown root initiationPlantingPod maturity / harvestingearly vegetative / vegetative / vegetativeLand preparation & Germination / crown root initiationPlantingPotatoearly vegetative / vegetative / sowingGinge	Sugarcana	Kharif Vogotoblog		Dico	Torio
Care maturitymaturityVegetative / HoweringLate HarvestingformationWheatEarly sown wheatRabi pulsesRai, mustardMangoField preparation & sowingSeedlingEarly vegetativeEarly vegetativeVegetativeUttarakhandUttarakhandPeaToriaSugarcanePotatoKharif RicePod formation / maturityMaturityTuber growthHarvestingFingerMillet/ AmranthusMango/LitchiWheatMaturityVegetativeSeedling / crown root initiationMaturityVegetativeSeedling / crown root initiationBlack Gram & Green GramLand preparation & sowing / transplanting Early sown - early vegetativeHarvestingFlowering / pod formationMaturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingearly vegetative / vegetative / sowingLand preparation & sowingGermination / crown root initiationPlantingearly vegetative / vegetative / vegetative / sowingHarvestingHarvestingHarvestingWRC RiceGingerMilletJhum PaddyPotatoHarvestingHarvestingHarvestingHarvestingvegetativeRabi VegetablesWheat / MustardPea / rabi maizeEarly weatHarvestingForty wateriting / Early wateriting /Early weatingHarvestingVegetative<					
Field preparation & sowing       Seedling       Early vegetative       Early vegetative       Early vegetative         Uttarakhand         Pea       Toria       Sugarcane       Potato       Kharif Rice         Pod formation       Pod formation / maturity       Maturity       Tuber growth       Harvesting         FingerMillet/ Amranthus       Mango/Litchi       Wheat       Pod       Seedling / crown root initiation         Maturity       Vegetative       Seedling / crown root initiation       Black Gram & Green Gram         Maturity       Vegetative       Seedling / pod formation       Maturity / harvesting         Winter vegetables       Sugarcane       Arhar       Sali rice       Black Gram & Green Gram         Land preparation & sowing / transplanting Early sown – early vegetative / vegetative       Harvesting       Flowering / pod formation / crown root initiation       Pod maturity / harvesting         Rabi crops       Wheat       Early wheat       Horticultural plants       Pod maturity / harvesting         early vegetative / vegetative       Land preparation & Germination / crown root initiation       Planting       Potato         vegetative       Maturity market       Gram       Potato       Potato         Harvesting       Harvesting       Harvesting       Vegetative	Cane maturity		Vegetative / flowering	Late Harvesting	• •
sowingSeedingEarly vegetativeEarly vegetativeVegetativeVegetativeUttarakhandPeaToriaSugarcanePotatoKharif RicePod formation / maturityMaturityTuber growthHarvestingFingerMillet/ AmranthusMango/LitchiWheatImage: Colspan="3">Mango/LitchiMaturityVegetativeSeedling / crown root initiationMaturityVegetativeSeedling / crown root initiationImage: Colspan="3">MaturityWinter vegetablesSugarcaneArharSali riceBlack Gram & Green GramLand preparation & sowing / transplanting Early sown – early vegetative / vegetativeHarvestingFlowering / pod formationMaturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingearly vegetative / vegetative / vegetative / sowingLand preparation & sowingGermination / crown root initiationPlantingearly vegetative / vegetative / vegetative / vegetative / vegetative / sowingHard preparation & sowingGermination / crown root initiationPlantingearly vegetative / vegetative / vegetative / vegetative / vegetativeGingerMilletJhum PaddyPotatoHarvestingHarvestingHarvestingHarvestingVegetativeVegetativeEarly wavesting / vegetative /Farly wavestingHarvestingVegetative		Early sown wheat	Rabi pulses	Rai , mustard	Mango
PeaToriaSugarcanePotatoKharif RicePod formationPod formation / maturityMaturityTuber growthHarvestingFingerMillet/ AmranthusMango/LitchiWheatWheatTuber growthHarvestingMaturityVegetativeSeedling / crown root initiationSeedling / crown root initiationSali riceBlack Gram & Green GramWinter vegetablesSugarcaneArharSali riceBlack Gram & Green GramLand preparation & sowing / transplanting Early sown - early vegetative / vegetativeHarvestingFlowering / pod formationPod maturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingearly vegetative / vegetative / vegetative / sowingLand preparation & sowingGermination / crown root initiationPlantingWRC RiceGingerMilletJhum PaddyPotatoHarvestingHarvestingHarvestingvegetative / vegetative /vegetative / vegetative /Babi VegetablesWheat / MustardPea / rabi maizeVegetative / Vegetative /Vegetative		Seedling	Early vegetative	Early vegetative	Vegetative
Pod formation     Pod formation / maturity     Maturity     Tuber growth     Harvesting       FingerMillet/ Amranthus     Mango/Litchi     Wheat     Tuber growth     Harvesting       Maturity     Vegetative     Seedling / crown root initiation     Seedling / crown root initiation     Black Gram & Green Gram       Winter vegetables     Sugarcane     Arhar     Sali rice     Black Gram & Green Gram       Land preparation & sowing / transplanting Early sown – early vegetative / vegetative     Harvesting     Flowering / pod formation     Maturity / harvesting     Pod maturity / harvesting       Rabi crops     Wheat     Early wheat     Horticultural plants       early vegetative / vegetative     Land preparation & sowing     Germination / crown root initiation     Planting       WRC Rice     Ginger     Millet     Jhum Paddy     Potato       Harvesting     Harvesting     Harvesting     vegetative       Rabi Vegetables     Wheat / Mustard     Pea / rabi maize     vegetative			Uttarakhand		
FingerMillet/ Amranthus     Mango/Litchi     Wheat       Maturity     Vegetative     Seedling / crown root initiation       Maturity     Vegetative     Seedling / crown root initiation       Winter vegetables     Sugarcane     Arhar     Sali rice     Black Gram & Green Gram       Land preparation & sowing / transplanting Early sown – early vegetative / vegetative     Harvesting     Flowering / pod formation     Maturity / harvesting     Pod maturity / harvesting       Rabi crops     Wheat     Early wheat     Horticultural plants     Pod maturity / harvesting       early vegetative / vegetative     Land preparation & sowing     Germination / crown root initiation     Planting       WRC Rice     Ginger     Millet     Jhum Paddy     Potato       Harvesting     Harvesting     Harvesting     Vegetative / root initiation       Kabi Vegetables     Wheat/Mustard     Pea / rabi maize     Vegetative / root initiation					
AmranthusMango/LitchiWneatMaturityVegetativeSeedling / crown root initiation	Pea	Toria	Sugarcane	Potato	Kharif Rice
Maturity     Vegetative     initiation       Winter vegetables     Sugarcane     Arhar     Sali rice     Black Gram & Green Gram       Land preparation & sowing / transplanting Early sown – early vegetative / vegetative     Harvesting     Flowering / pod formation     Maturity / harvesting     Pod maturity / harvesting       Rabi crops     Wheat     Early wheat     Horticultural plants     Pod maturity / harvesting       early vegetative / vegetative / vegetative / vegetative / sowing     Germination / crown root initiation     Planting       early vegetative / harvesting     Hard preparation & Germination / crown root initiation     Planting     Potato       WRC Rice     Ginger     Millet     Jhum Paddy     Potato       Harvesting     Harvesting     Harvesting     Harvesting     vegetative / vegetative / vegetative       Rabi Vegetables     Wheat / Mustard     Pea / rabi maize     Vegetative / Vegetative / Vegetative / Early were trive / Vegetative / Vegetative     Vegetative / Vegetati	Pod formation		8		~
Winter vegetablesSugarcaneArharSali riceBlack Gram & Green GramLand preparation & sowing / transplanting Early sown – early vegetative / vegetativeHarvestingFlowering / pod formationMaturity / harvestingPod maturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingearly vegetative / vegetative / vegetative / sowingLand preparation & sowingGermination / crown root initiationPlantingearly vegetative / vegetativeLand preparation & sowingGermination / crown root initiationPlantingWRC RiceGingerMilletJhum PaddyPotatoHarvestingHarvestingHarvestingHarvestingvegetativeRabi VegetablesWheat / MustardPea / rabi maizeVegetative / Learly vegetative / Learly vegetative / Learly vegetativeFarly vegetative / Learly vegetativeEarly vegetative / Learly vegetative	Pod formation FingerMillet/	Pod formation / maturity	Maturity Wheat		
Winter vegetablesSugarcaneArnarSali riceGramLand preparation & sowing / transplanting Early sown – early vegetative / vegetativeHarvestingFlowering / pod formationMaturity / harvestingPod maturity / harvestingRabi cropsWheatEarly wheatHorticultural plantsPod maturity / harvestingearly vegetative / vegetativeLand preparation & sowingGermination / crown root initiationPlantingImage: Comparison of the state of the	Pod formation FingerMillet/ Amranthus	Pod formation / maturity Mango/Litchi	Maturity Wheat Seedling / crown root		~
sowing / transplanting Early sown - early vegetative / vegetative       Harvesting       Flowering / pod formation       Maturity / harvesting       Pod maturity / harvesting         Rabi crops       Wheat       Early wheat       Horticultural plants       Pod maturity / harvesting         early vegetative / vegetative       Land preparation & sowing       Germination / crown root initiation       Planting	Pod formation FingerMillet/ Amranthus	Pod formation / maturity Mango/Litchi	Maturity Wheat Seedling / crown root initiation		Harvesting
Rabi cropsWheatEarly wheatHorticultural plantsearly vegetative / vegetativeLand preparation & sowingGermination / crown root initiationPlantingBurderSowingGermination / crown root initiationPlantingWRC RiceGingerMilletJhum PaddyPotatoHarvestingHarvestingHarvestingHarvestingvegetativeRabi VegetablesWheat / MustardPea / rabi maizeEarly vegetative /	Pod formation FingerMillet/ Amranthus Maturity	Pod formation / maturity Mango/Litchi Vegetative	Maturity Wheat Seedling / crown root initiation Assam	Tuber growth	Harvesting Black Gram & Green
early vegetative / vegetative     Land preparation & sowing     Germination / crown root initiation     Planting       WRC Rice     Ginger     Millet     Jhum Paddy     Potato       Harvesting     Harvesting     Harvesting     Harvesting     vegetative       Rabi Vegetables     Wheat / Mustard     Pea / rabi maize     Early vegetative /     Early vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early	Pod formation / maturity Mango/Litchi Vegetative Sugarcane	Maturity Wheat Seedling / crown root initiation Assam Arhar Flowering / pod	Tuber growth Sali rice	Harvesting Black Gram & Green Gram Pod maturity /
Arunachal Pradesh         WRC Rice       Ginger       Millet       Jhum Paddy       Potato         Harvesting       Harvesting       Harvesting       Vegetative         Rabi Vegetables       Wheat / Mustard       Pea / rabi maize       Early vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative	Pod formation / maturity Mango/Litchi Vegetative Sugarcane Harvesting	Maturity Wheat Seedling / crown root initiation Assam Arhar Flowering / pod formation	Tuber growth          Sali rice         Maturity / harvesting         Horticultural	Harvesting Black Gram & Green Gram Pod maturity /
Harvesting         Harvesting         Harvesting         West           Rabi Vegetables         Wheat / Mustard         Pea / rabi maize         Vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative Rabi crops early vegetative /	Pod formation / maturity Mango/Litchi Vegetative Sugarcane Harvesting Wheat Land preparation &	Maturity Wheat Seedling / crown root initiation Assam Arhar Flowering / pod formation Early wheat Germination / crown	Tuber growth Sali rice Maturity / harvesting Horticultural plants	Harvesting Black Gram & Green Gram Pod maturity /
Rabi Vegetables         Wheat / Mustard         Pea / rabi maize           Early vegetative /         Farly vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative Rabi crops early vegetative /	Pod formation / maturity         Mango/Litchi         Vegetative         Sugarcane         Harvesting         Wheat         Land preparation & sowing	Maturity Wheat Seedling / crown root initiation Assam Arhar Flowering / pod formation Early wheat Germination / crown root initiation	Tuber growth Sali rice Maturity / harvesting Horticultural plants	Harvesting Black Gram & Green Gram Pod maturity /
Early vegetative / Early vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative Rabi crops early vegetative / vegetative	Pod formation / maturity         Mango/Litchi         Vegetative         Sugarcane         Harvesting         Wheat         Land preparation & sowing	Maturity Wheat Seedling / crown root initiation Assam Arhar Flowering / pod formation Early wheat Germination / crown root initiation Arunachal Pradesh	Tuber growth Sali rice Maturity / harvesting Horticultural plants Planting	Harvesting Black Gram & Green Gram Pod maturity / harvesting
Vagatative Early vegetative / Early vegetative /	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative Rabi crops early vegetative / vegetative WRC Rice Harvesting	Pod formation / maturity         Mango/Litchi         Vegetative         Sugarcane         Harvesting         Wheat         Land preparation & sowing         Ginger         Harvesting	Maturity         Wheat         Seedling / crown root initiation         Assam         Arhar         Flowering / pod formation         Early wheat         Germination / crown root initiation         Arunachal Pradesh         Millet         Harvesting	Tuber growth          Sali rice         Maturity / harvesting         Horticultural plants         Planting	Harvesting Black Gram & Green Gram Pod maturity / harvesting Potato
Vegetative vegetative vegetative vegetative	Pod formation FingerMillet/ Amranthus Maturity Winter vegetables Land preparation & sowing / transplanting Early sown – early vegetative / vegetative Rabi crops early vegetative / vegetative WRC Rice Harvesting	Pod formation / maturity         Mango/Litchi         Vegetative         Sugarcane         Harvesting         Wheat         Land preparation & sowing         Ginger         Harvesting         Wheat / Mustard	Maturity         Wheat         Seedling / crown root initiation         Assam         Arhar         Flowering / pod formation         Early wheat         Germination / crown root initiation         Arunachal Pradesh         Millet         Harvesting         Pea / rabi maize	Tuber growth          Sali rice         Maturity / harvesting         Horticultural plants         Planting	Harvesting Black Gram & Green Gram Pod maturity / harvesting Potato

Bihar				
Vegetables & fruit	Maize fodder	Arhar	Sugarcane	Kharif rice

crops						
Sowing	vegetative		Vege	tative	Vegetative	Maturity
Rabi oilseeds, wheat	Gram		80	-		······································
Sowing		sowing				
			Jharkha	nd		
Kharif rice		Potato		Vegetables (Tomato, Brinjal, Bhendi)		Wheat
Grain maturity				Early	vegetative	Sowing
Pea, gram		Potato				
Early vegetative / veget	ative	Early vegetative /	vegetative			
			Sikkin	n		
Orange	Vegetables (Cauliflower, Cabbage, Carot, Beat, tomato)		Large Ca	rdamom	Ginger	Rice
Harvesting		vegetative	Nursery sowing		Harvesting	Harvesting
Wheat	Earl	y sown wheat & mustard	Mus	Mustard		
Sowing	Ea	arly vegetative	Early ve	getative		
			West Ber	ngal	•	·
Sugarcane		Groundnut	Arh		Aman rice	Mustard / Rapeseed / Wheat / gram / lentil
Cane development	]	Pod maturity	Pod format arhar- se	,	Grain maturity harvesting	/ Land preparation / sowing
Early sown Mustard / Rapeseed / Wheat / gram / lentil	Rabi arhar		Pot	ato	Sunflower	Early sown Sunflower
Germination / early vegetative		Sowing	Planting		Land preparation sowing	n / Germination / early vegetative
			Chattisg	arh		
Sugarcane	Rapeseed, Toria, Niger			n mustard, nd niger	Kharif Rice	Tomato, Brinjal, Chilli
Vegetative		mination / early vegetative ria - vegetative	e Germination / early		Grain maturity harvesting	/ Vegetative / flowering
Rabi crops	Potato		Wh	eat		
Land preparation &	Lan	d preparation &		aration &		
sowing	sowing planting		sow	U		
			Gujara	at	[	
Sugarcane		Mustard	Wheat		Castor	Kharif Cotton
Early cane maturity/harvesting	Ea	rly vegetative / vegetative	Land preparation & sowing		Spike formatio	n Boll formation/ boll maturity / picking
Early sown wheat		y sown mustard	, i i i i i i i i i i i i i i i i i i i	wn wheat		
Germination / early		mination / early		ion / early		
vegetative	vege	tative/vegetative	Ũ	ative		
0 P -			Maharas	ntra		
Sugarcane Preseasonal (Madhya Maharashtra, Marathwada & Vidarbha)	(Mad	garcane (Suru) hya Mahrashtra, arthwada and Vidarbha)	Rabi safflower		Rabi Jowar	<i>Kharif</i> Tur (Madhya Maharashtra, Marathwada & Vidarbh
Active growth / elongation	А	ctive growth / elongation	early vegetative		Germination / ear vegetative	Pod formation
<i>Kharif</i> Cotton (Madhya Maharashtra, Marathwada & Vidarbha)	(Madł	rigated cotton nya Maharashtra, arathwada & Vidarbha)	Rabi potato		Rabi onion	Gram (Madhya Maharashtra, Marathwada & Vidarbha)
Boll maturity / picking		maturity / picking	Sproutin vege	g / early tative	Planting	Seedling/early vegetative
Wheat (Konkan, Madhya Maharashtra, Marathwada &	Maize (Madhya Maharashtra, Marathwada &					

Vidarbha)	Vidarbha)			
Germination / early vegetative / crown root initiation	Germination/early vegetative			
		Madhya Pradesh		
Sugarcane	Barseem	Rabi crops (linseed, lentil, gram, mustard)	Rabi vegetables (cabbage, cauliflower, onion)	Kharif Cotton
Grand growth	Sowing	germination / early vegetative	Nursery sowing / Early sown crops are at germination stage	Picking
Pea	Wheat	Early sown wheat		
Sowing	Sowing	Germination / crown root initiation		
		Orissa		
Kharif vegetables	Kharif rice	Sugarcane, Mung & urd	Arhar	Rabi oilseeds
Vegetative / fruiting	Maturity	Vegetative	Flowering / pod formation	Sowing
		Andhra Pradesh		
Kharif Rice	Kharif Cotton	Kharif Groundnut	Rabi red gram / chillies	
Harvesting	Picking	End Harvesting	Vegetative	
		Karnataka		
Sugarcane (Ratoon crop)	Rabi Jowar/Maize/Cotton/ Sunflower			
Grand growth	Vegetative / flowering			
		Kerala		
Rubber	Mundakkan Rice	Pepper		
Tapping	Grain formation / maturity	harvesting		
	_	Tamil Nadu		
Rice (Samba)	Sugarcane (Early, Mid season)	Maize	Groundnut/Black gram/Green gram/Red gram	Cotton
Vegetative	Cane development / maturity	Grain formation	Sowing	Picking
Jowar/Bajra/Samai	Special season sugarcane	Early sown jowar / bajra / samai	Early sown Groundnut/Black gram/Green gram/Red gram	Coriander
Sowing	Grand growth	Early vegetative / vegetative	Early vegetative / vegetative	Sowing

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