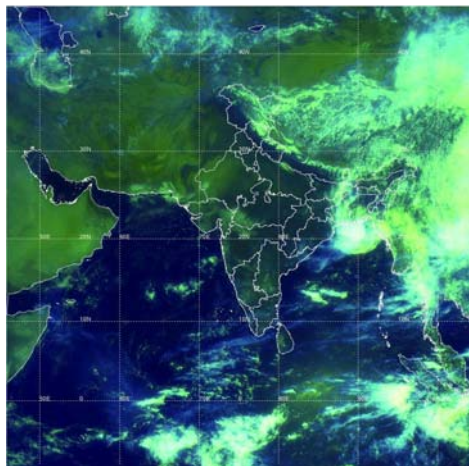




National Agromet Advisory Bulletin

Thursday, 25th September, 2008

(For the period 25th to 29th September, 2008)



26th September, 2008,
5 UTC



Flood situation in Orissa worsened due to 43 new breaches on embankments in Mahanadi delta region. Several villages in the districts of Angul, Bhadrak, Bolangir, Cuttack, Gajapati, Jajpur, Jagatsinghpur, Kendrapara, Keonjhar, Boudh, Kalahandi, Khordha, Puri, Nayagarh, Rayagada, Subarnpur and Sambalpur are reported to have been inundated and affected severely. About 4.5 lakh ha crop area has also been damaged so far. Lodging of rice crop in coastal districts is occurred due to flooding.

Due to receding of flood water in some areas, crop situation in North Bihar is improving. In areas, where flood water is receding, farmers may go for sowing of early potato, wheat and lentil. The detailed contingency plan is given in page no. 11.

There are reports of damage to standing *kharif* crops in Punjab due recent heavy rain / wind. As per preliminary estimates, some damage is expected to occur in rice, cotton and other crops. Most affected districts are Sangrur, Hoshiarpur, Ludhiana, Barnala, Bathinda and Mansa where damage to cotton and rice may be maximum.

Issued by


National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.


The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division


| Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks | |
|--|---|
| Sub-division | Cumulative Rainfall (% Dep.) for the period |


| | 27 th August | 3 rd September | 10 th September | 17 th September | 24 th September |
|-------------------------------|-------------------------|---------------------------|----------------------------|----------------------------|----------------------------|
| A & N Islands | 0 | -46 | 5 | 63 | -74 |
| Arunachal Pradesh | -10 | 61 | -13 | -88 | -59 |
| Assam and Meghalaya | -15 | 121 | -13 | -55 | -24 |
| NNMT | -16 | 26 | -23 | -26 | 93 |
| SH West Bengal & Sikkim | -3 | 143 | 17 | -67 | -43 |
| Gangetic West Bengal | -77 | -1 | 8 | 13 | 50 |
| Orissa | 6 | -49 | 11 | 160 | 125 |
| Jharkhand | -62 | -54 | -4 | 6 | 58 |
| Bihar | -59 | 45 | 15 | -81 | -51 |
| East Uttar Pradesh | -49 | -74 | 20 | -89 | 242 |
| West Uttar Pradesh | -57 | -89 | 14 | -34 | 128 |
| Uttaranchal | 06 | -78 | -5 | -81 | 289 |
| Haryana, Chandigarh and Delhi | -19 | -86 | 5 | -75 | 530 |
| Punjab | -83 | -53 | 26 | -97 | 119 |
| Himachal Pradesh | -35 | -73 | -10 | -93 | 397 |
| J & K | -1 | -67 | 11 | -64 | -69 |
| West Rajasthan | -19 | -99 | 8 | 9 | 116 |
| East Rajasthan | -69 | -89 | -10 | 88 | 193 |
| West M. P. | -58 | -94 | -23 | -21 | 21 |
| East M. P. | -63 | -71 | -13 | -74 | 110 |
| Gujarat region | -46 | -91 | -14 | 234 | 218 |
| Saurashtra & Kutch | -68 | -94 | -25 | 893 | 291 |
| Konkan and Goa | -71 | -81 | 0 | 323 | 66 |
| Madhya Maharashtra | -54 | 91 | -1 | 263 | 16 |
| Marathwada | -62 | 10 | -25 | 206 | -13 |
| Vidarbha | -49 | -57 | -19 | 12 | -23 |
| Chhattisgarh | -49 | -44 | -12 | -46 | 100 |
| Coastal A. P. | -17 | -71 | 14 | 63 | -69 |
| Telangana | -42 | -65 | 8 | 95 | -68 |
| Rayalseema | 46 | 89 | 29 | -86 | -84 |
| TamilNadu & Pondicherry | 75 | 49 | 33 | -85 | -78 |
| Coastal Karnataka | -90 | -62 | -17 | 141 | -28 |
| N. I. Karnataka | -51 | 91 | 0 | -10 | -60 |
| S. I. Karnataka | 2 | 281 | 25 | -17 | -62 |
| Kerala | -78 | 70 | -22 | 92 | -20 |
| Lakshadweep | -23 | 295 | 7 | -92 | -93 |


The sub divisions like West Madhya Pradesh, received scanty / deficient rain in 4 out of last 5 weeks; Bihar, Punjab, Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, East Madhya Pradesh, Saurashtra & Kutch, Vidarbha, Chhattisgarh, Telangana, Coastal Karnataka, Kerala and Lakshadweep received scanty / deficient rain in 3 out of last 5 weeks. Other subdivisions received normal or excess rain for at least 3 weeks out of last 5 weeks.

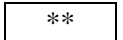
 (20% or more excess rainfall)

 (-60 to -99 % scanty rainfall)

 (-19 to +19% normal rainfall)

 (-100% no rainfall)







 (-20 to -59% deficient rainfall)

 (** (Data not available)

Districts experiencing stress condition

| *** Most Stress | | | | | |
|---------------------------|----------|----------|----------|----------|----------|
| Districts | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Arunachal Pradesh | | | | | |
| Changlang | -54 | -78 | -85 | -88 | -52 |
| Lower Subansiri | -89 | -21 | -50 | -85 | -67 |
| Assam | | | | | |
| Jorhat | 1 | -36 | -72 | -83 | -63 |
| Himachal Pradesh | | | | | |
| Kangra | -43 | -49 | -50 | -88 | -32 |
| Punjab | | | | | |
| Faridkot | -100 | -100 | -100 | -100 | -100 |
| Fatehgarh Sahib | -100 | -100 | -75 | -100 | -76 |
| Gurdaspur | -83 | -88 | -64 | -100 | -76 |
| Jalandhar | -90 | -36 | -62 | -100 | -72 |
| Moga | 76 | -44 | -100 | -100 | -100 |
| Madhya Pradesh | | | | | |
| East Madhya Pradesh | | | | | |
| Katni | -96 | -30 | -68 | -80 | -91 |
| Rewa | -92 | -49 | -88 | -87 | -23 |
| Tikamgarh | -55 | -94 | -100 | -41 | -31 |
| West Madhya Pradesh | | | | | |
| Harda | -100 | -100 | -82 | -100 | -32 |
| Chattisgarh | | | | | |
| Kanker | -75 | -90 | -46 | -88 | -20 |
| Koriya | -74 | -86 | -83 | -100 | -100 |
| Uttar Pradesh | | | | | |
| East Uttar Pradesh | | | | | |
| Ambedkar Nagar | ** | -100 | -100 | -81 | -85 |
| Deoria | -100 | -100 | -68 | -94 | -60 |
| Maharajganj | ** | -85 | -92 | -88 | -78 |
| Varanasi | -67 | -82 | -45 | -90 | -77 |
| West Uttar Pradesh | | | | | |
| Firozabad | -100 | -100 | -100 | -87 | -82 |
| Meerut | -57 | -93 | -90 | -56 | -47 |
| Bihar | | | | | |
| Bhagalpur | 59 | -44 | -71 | -67 | -20 |
| Bhojpur | -73 | -39 | -30 | -100 | -85 |
| Buxar | -72 | -99 | -89 | -89 | -77 |

| *** Most Stress | | | | | |
|------------------------|----------|----------|----------|----------|----------|
| Districts | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Gaya | -59 | -76 | -87 | -80 | -28 |
| Supaul | -100 | -24 | -73 | -100 | -99 |
| Vaishali | -41 | -64 | -32 | -96 | -73 |
| Jharkhand | | | | | |
| Palamau | -61 | -100 | -80 | -69 | -69 |
| Rajasthan | | | | | |
| West Rajasthan | | | | | |
| Barmer | -100 | -100 | -100 | -31 | -100 |
| Orissa | | | | | |
| Malkangiri | -87 | -96 | -22 | -55 | -52 |
| West Bengal | | | | | |
| GWB | | | | | |
| Murshidabad | -86 | -79 | -94 | -71 | -58 |
| Andhra Pradesh | | | | | |
| Coastal Andhra Pradesh | | | | | |
| Nellore | 26 | -77 | -29 | -76 | -47 |

| | | | |
|---|----------------------------------|---|--------------------------------|
|  | (20% or more excess rainfall) |  | (-60 to -99 % scanty rainfall) |
|  | (-19 to +19% normal rainfall) |  | (-100% no rainfall) |
|  | (-20 to -59% deficient rainfall) |  | ** (Data not available) |







- *** Most stress (more than 3 weeks continuously deficient to no rain)
- **More stress (3 weeks continuously deficient to no rain)
- *Stress (2 weeks continuously deficient to no rain)

| **More Stress | | | | | |
|---------------------------|----------|----------|----------|----------|----------|
| Districts | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Arunachal Pradesh | | | | | |
| East Slang | 153 | 207 | -81 | -100 | -91 |
| Lohit | 48 | -2 | -56 | -91 | -48 |
| Tirap | -27 | 103 | -49 | -26 | -32 |
| Upper Subansiri | -86 | 81 | -49 | -100 | -97 |
| Assam | | | | | |
| Darrang | -63 | 280 | -56 | -79 | -45 |
| Dibrugarh | 2 | 96 | -60 | -72 | -53 |
| East Garo Hills | -90 | 222 | -81 | -43 | -100 |
| Karimganj | -67 | 16 | -79 | -85 | -67 |
| Lakhimpur | -38 | 200 | -61 | -36 | -40 |
| Tinsukia | 33 | 49 | -51 | -55 | -22 |
| Punjab | | | | | |
| Ferozpur | -100 | -2 | -68 | -100 | -71 |
| Kapurthala | -35 | -16 | -100 | -100 | -22 |
| Uttar Pradesh | | | | | |
| East Uttar Pradesh | | | | | |
| Gazipur | -87 | -9 | -28 | -100 | -50 |
| Mirzapur | -92 | -10 | -96 | -97 | -29 |
| Bihar | | | | | |
| Darbhanga | -81 | 43 | -32 | -49 | -100 |
| East Champaran | -44 | 17 | -29 | -79 | -46 |
| Kathihar | -92 | 23 | -78 | -79 | -57 |
| Khagadia | -74 | 222 | -60 | -80 | -73 |
| Madhubani | -93 | 48 | -26 | -89 | -75 |
| Muzaffarpur | 3 | 24 | -52 | -50 | -94 |
| Patna | -28 | 76 | -35 | -93 | -71 |
| Saharsha | -99 | 150 | -39 | -81 | -97 |
| Sitamarhi | -53 | 187 | -36 | -100 | -69 |
| West Champaran | -39 | 23 | -31 | -96 | -81 |
| Kerala | | | | | |
| Thiruvananthapuram | -97 | 586 | -32 | -100 | -100 |
| Tamil Nadu | | | | | |
| Madurai | 261 | 49 | -29 | -100 | -100 |
| Tuticorin | 184 | 268 | -73 | -100 | -100 |

| *Stress | | | | | |
|----------------------------|----------|----------|----------|----------|----------|
| Districts | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Arunachal Pradesh | | | | | |
| East Kameng | -7 | 346 | 75 | -83 | -100 |
| Assam | | | | | |
| Barpeta | 29 | 1065 | 105 | -93 | -83 |
| Bongaigaon | 82 | 210 | 12 | -99 | -94 |
| Dhubri | -99 | 376 | 139 | -99 | -88 |
| East Khasi Hills | 9 | 532 | -1 | -61 | -43 |
| Goalpara | -57 | 434 | 150 | -77 | -83 |
| Kamrup | -73 | 69 | -10 | -97 | -39 |
| Kokrajhar | 138 | 492 | 259 | -75 | -79 |
| Haryana | | | | | |
| Sirsa | -100 | -100 | 37 | -100 | -21 |
| Madhya Pradesh | | | | | |
| West Madhya Pradesh | | | | | |
| Badwani | -100 | -70 | 119 | -71 | -55 |
| Dewas | -40 | -96 | 9 | -92 | -34 |
| Indore | -16 | -94 | 89 | -20 | -23 |
| Mandsaur | -61 | -96 | 45 | -20 | -38 |
| Rajgarh | -63 | -100 | -16 | -20 | -76 |
| Ujjain | -51 | -99 | 67 | -23 | -58 |
| Chattisgarh | | | | | |
| Bastar | -59 | -33 | 67 | -27 | -33 |
| Uttar Pradesh | | | | | |
| East Uttar Pradesh | | | | | |
| Ballia | -55 | -27 | 46 | -87 | -43 |
| Jaunpur | -28 | -98 | -3 | -86 | -55 |
| Bihar | | | | | |
| Purnea | -10 | 162 | 22 | -71 | -54 |
| Siwan | -40 | -59 | 162 | -92 | -95 |
| Rajasthan | | | | | |
| West Rajasthan | | | | | |
| Sri Ganganagar | -82 | -97 | 136 | -100 | -42 |
| Maharashtra | | | | | |
| Vidharbha | | | | | |
| Gadchiroli | -44 | -55 | 10 | -47 | -58 |
| Nagpur | -42 | -81 | 7 | -43 | -65 |
| West Bengal | | | | | |
| SHWB | | | | | |
| Coochbehar | 51 | 242 | 5 | -98 | -71 |
| Darjeeling | -2 | 99 | -13 | -70 | -41 |

| *Stress | | | | | |
|--------------------------|----------|----------|----------|----------|----------|
| | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Jalpaiguri | 32 | 207 | 2 | -83 | -72 |
| Malda | -70 | -45 | -11 | -47 | -72 |
| Dinajpur (S) | -83 | -1 | 104 | -100 | -100 |
| Karnataka | | | | | |
| North Interior Karnataka | | | | | |
| Bagalkote | -37 | 103 | 320 | -82 | -61 |
| Bijapur | 100 | 100 | 322 | -66 | -54 |
| Gadag | -94 | 108 | 128 | -54 | -84 |
| Karnataka | | | | | |
| Koppal | -99 | 155 | 477 | -92 | -38 |
| Raichur | -76 | 181 | 263 | -85 | -77 |
| South Interior Karnataka | | | | | |
| Bangalore Rural | 150 | 170 | 144 | -87 | -100 |
| Bangalore Urban | 79 | 194 | 51 | -90 | -99 |
| Bellary | -51 | 178 | 341 | -92 | -84 |
| Chamarajnagar | 296 | 388 | 143 | -93 | -96 |
| Chitradurga | 33 | 585 | 516 | -84 | -94 |
| Davangere | -87 | 344 | 210 | -64 | -82 |
| Kolar | 84 | 327 | 252 | -80 | -99 |
| Mandya | 119 | 223 | 242 | -98 | -97 |
| Mysore | 107 | 242 | 54 | -81 | -93 |
| Tumkur | 286 | 730 | 156 | -92 | -73 |
| Kerala | | | | | |
| Alappuzha | -90 | 87 | -3 | -100 | -83 |
| Kannur | -92 | -74 | 174 | -95 | -100 |
| Ernakulam | -86 | 72 | 52 | -93 | -100 |
| Idukki | -30 | 68 | 103 | -100 | -100 |
| Kasaragod | -93 | -89 | 673 | -98 | -100 |
| Kollam | -75 | 286 | 189 | -100 | -100 |
| Kozhikode | -98 | 3 | 3 | -90 | -100 |
| Malappuram | -94 | 69 | 139 | -97 | -100 |
| Palakkad | -87 | 67 | 150 | -93 | -100 |
| Pathanamthitta | -92 | 370 | 13 | -100 | -100 |
| Thiruvananthapuram | -97 | 586 | -32 | -100 | -100 |
| Thrissur | -95 | -17 | 76 | -100 | -100 |
| Tamil Nadu | | | | | |
| Chennai | -77 | -100 | 49 | -73 | -95 |
| Dharmapuri | 196 | -56 | 211 | -100 | -91 |
| Dindigul | 356 | 242 | 65 | -99 | -92 |

| *Stress | | | | | |
|------------------------|----------|----------|----------|----------|----------|
| | 27/08/08 | 03/09/08 | 10/09/08 | 17/09/08 | 24/09/08 |
| Erode | 294 | 126 | 183 | -95 | -83 |
| Karur | 134 | 123 | 24 | -100 | -97 |
| Krishnagiri | 74 | 76 | 213 | -99 | -86 |
| Nagapattinam | -28 | 22 | 12 | -97 | -23 |
| Namakkal | 173 | 301 | 166 | -99 | -81 |
| Perambalur | -22 | -49 | -14 | -99 | -83 |
| Pondicherry | -89 | -77 | -15 | -100 | -72 |
| Pudukottai | 157 | -97 | 10 | -100 | -69 |
| Ramanathapuram | 304 | 33 | 252 | -100 | -100 |
| Salem | 128 | 156 | 183 | -96 | -90 |
| Sivaganga | 131 | -21 | 19 | -100 | -50 |
| Thanjavur | 19 | -57 | -9 | -98 | -59 |
| Tamil Nadu | | | | | |
| Theni | 377 | 196 | 488 | -47 | -96 |
| Tiruvannamalai | -67 | -73 | 65 | -100 | -66 |
| Trichy | 105 | -6 | 65 | -100 | -100 |
| Vellore | -93 | 9 | 41 | -86 | -77 |
| Villupuram | -66 | -86 | 54 | -99 | -80 |
| Virudhunagar | 172 | 192 | -3 | -100 | -95 |
| Andhra Pradesh | | | | | |
| Coastal Andhra Pradesh | | | | | |
| Prakasam | 0 | -86 | 104 | -83 | -90 |
| Telangana | | | | | |
| Mehabubnagar | -4 | -93 | 85 | -23 | -55 |
| Rayalaseema | | | | | |
| Anantapur | 158 | 417 | 569 | -97 | -83 |
| Chittoor | -20 | 58 | 187 | -85 | -81 |
| Cuddapah | 31 | -87 | 252 | -95 | -80 |
| Kurnool | 22 | -30 | 251 | -69 | -88 |
| Punjab | | | | | |
| Amritsar | -100 | -39 | 33 | -100 | -51 |
| Hoshiarpur | -74 | -60 | 4 | -100 | -78 |

| | | | |
|---|----------------------------------|---|--------------------------------|
|  | (20% or more excess rainfall) |  | (-60 to -99 % scanty rainfall) |
|  | (-19 to +19% normal rainfall) |  | (-100% no rainfall) |
|  | (-20 to -59% deficient rainfall) |  | (Data not available) |

*** Most stress (more than 3 weeks continuously deficient to no rain)

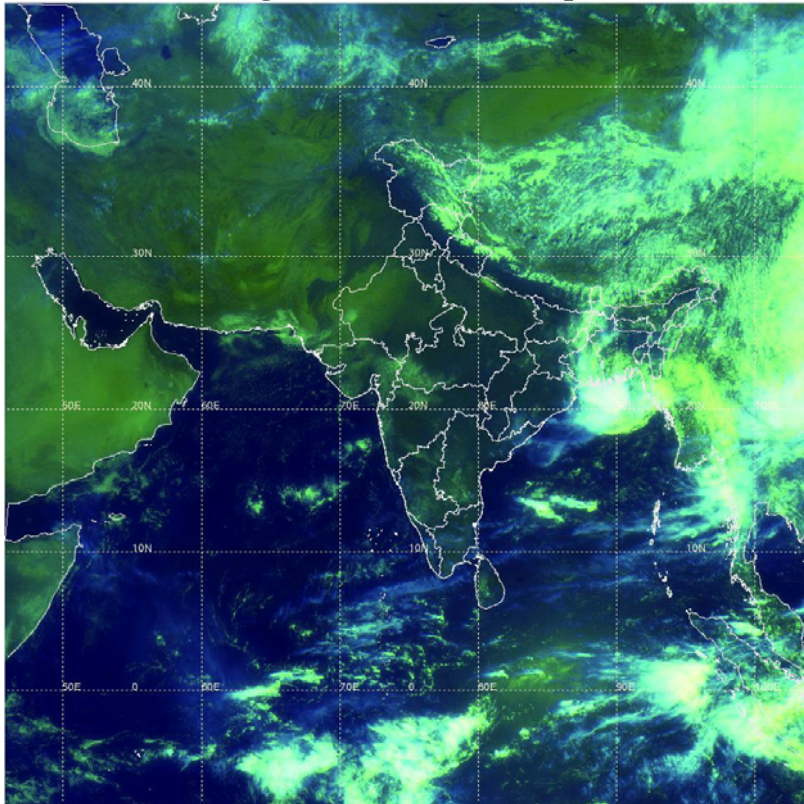
**More stress (3 weeks continuously deficient to no rain)

*Stress (2 weeks continuously deficient to no rain).

Chief Synoptic Feature (Based on 1430 hours IST observations of 25th September, 2008)

- Morning's feeble low pressure area over north Bay of Bengal and Neighborhood persists. Under the influence of above system, fairly widespread rainfall is likely over coastal areas of Orissa and West Bengal during next 24 hours and decrease thereafter.
- Current Meteorological Analysis and Numerical Weather Prediction models suggest subdued rainfall activity/mainly dry weather conditions likely over northwest, west and central India during next 4-5 days.
- Under this scenario, southwest monsoon likely withdrawal from parts of northwest India during next 2-3 days.

Satellite image of 5 UTC on 26th September 08



Zone-wise Forecast

NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Mainly dry weather is likely over the region.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rain in the region.

EAST INDIA [EAST UP, JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Rain/thundershowers are likely at many places over Coastal areas of Orissa and West Bengal during next 24 hours and decrease thereafter.
- Isolated rain/thundershowers over the rest region.

Quantitative District Weather Forecast for next five days:

- Light rain will occur in West Bengal and Sikkim while light to rather moderate rain will occur in rest part of the region.

NORTHEAST INDIA [Arunachal Pradesh, NMM & T, Assam, Meghalaya] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Rain/thundershowers are likely at a few places over Northeastern states during next 48 hours and increase thereafter.

Quantitative District Weather Forecast for next five days:

- Light to rather moderate rainfall will occur over the region.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Rain/thundershowers are likely at a few places over north Coastal Andhra Pradesh and Coastal Karnataka during next 24 hours and decrease thereafter.
- Isolated rain/thundershowers are likely over the rest region.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rain in the region except at few places light rainfall will occur.

WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT, RAJASTHAN] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Isolated rain / thundershowers over Konkan & Goa.
- Mainly dry weather is likely over the rest region.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rain in the region.

CENTRAL INDIA [M.P., CHHATTISGARH, VIDARBHA] (Forecast valid upto 1430 hours IST of 28th September, 2008)

- Mainly dry weather is likely over the region.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rain in the region.

Weather Outlook from 1430 IST of 28th to 1430 IST of 30th September, 2008 (Based on numerical weather products):

- Fairly widespread rainfall with isolated heavy falls is likely over northeastern states and West Bengal & Sikkim.
- Likely withdrawal of southwest monsoon from some more parts of northwest India.

Zonewise Agromet Advisories

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP]

Himachal Pradesh

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), Maize (cob formation / maturity / harvesting), Rice (flowering / grain formation), Apple (fruit development / maturity / harvesting), Tea (plucking), new planting of evergreen fruit plants.
- As most of the districts of the State received excess rain during last week, farmers are advised to postpone irrigation to the crops. Also arrange for draining out excess water from the field.
- As there is no chance of rain during next five days, weather condition is favourable to undertake intercultural operation to keep the field weed free.
- As prevailing weather condition is favourable, undertake nursery sowing of cauliflower and cabbage in low hills.
- It is optimum time for planting of evergreen plants like Mango, litchi, guava, citrus, loquat and amla in Sub-mountain & Low hills Sub tropical zone.

Plant Protection:

- The weather is congenial for spread of fruit rot in tomato, chilli and *shimla mirch*. For control apply Dithane M - 45 @ 2 – 3 g per litre of water in 10 – 15 days interval.
- The weather conditions are favourable for damping off disease of cauliflower seedlings in Mid Hill Sub-tropical Sub-humid zone. Hence, the farmers are advised to treat the nursery beds with formaline (one part formalin and 7 parts water). The treated beds should be covered with polythene sheets. This formalin treatment should be given 15 to 20 days before seed sowing. The seeds should be sown only when the soil becomes free from formalin vapours.
- Due to heavy rainfall during last week, the weather conditions are also favourable for black rot of cauliflower. As black rot of cauliflower is serious disease, the seeds should be treated properly. It is done by soaking seeds in tap water for 30 minutes followed by dipping in hot water for 30 minutes and finally giving a same duration dipping in streptocycline (1 g / 10 litres of water).

Animal Husbandry:

- Weather is conducive for spread of foot and mouth disease (FMD) and galgotu in animals. Farmers are advised for vaccination of animals against FMD.

Uttarakhand

- **Major Standing Crops:** Sugarcane (vegetative), Maize, groundnut and vegetables (vegetative/flowering/early maturity), Rice (vegetative, grain formation/early maturity in Nainital district), Urd (early vegetative), soybean (flowering/pod formation).
- As there was sufficient rain in most of the districts of the State during last week, postpone irrigation to the crop.
- Farmers are advised to undertake sowing of toria after harvesting of matured rice. Select Pant Toria-30, Pant toria-303 or PT 507 varieties.
- Application of fertilizers and intercultural operation in early sown crops may be carried out.
- Maintain 3 – 5 cm of water in rice the field.

Punjab

- **Major Standing Crops:** Rice (vegetative), Horticultural crops (vegetative), Sugarcane (vegetative), Early sown cotton (late vegetative/squaring stage), maize, groundnut (early vegetative to late vegetative), and Sunflower (vegetative/flowering).
- There are reports of damage to standing *kharif* crops in Punjab due recent heavy rain/wind. As per preliminary estimates, some damage is expected to occur in paddy, cotton and other crops. Most affected districts are Sangrur, Hoshiarpur, Ludhiana, Barnala, Bathinda and Mansa where damage to cotton and paddy may be maximum. The production of premium varieties of rice (1121 and Basmati) may suffer some loss and the production of cotton would also come down. Farmers are advised to postpone irrigation to the crops. Also provide adequate drainage facilities in the standing crops to avoid water logging.
- As Amritsar, Hoshiarpur, Ferozpur, Kapurthala, Faridkot, Fatehgarh Sahib, Gurdaspur, Jalandhar, Moga districts received insufficient rain during last few weeks and mainly dry weather is likely over the State, farmers are advised to apply irrigation.
- Sowing of toria can be undertaken using recommended varieties i.e PBT 37/TL 15 by utilizing the stored soil moisture.
- Farmers are advised to continue sowing of *desi* varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruits crops like sweet orange, lime mango and guava utilizing the rainfall during last week and available irrigation facilities.
- As there is chance of occurrence of thrips and *pyrilla* in sugarcane, farmers are advised to monitor the crop and need to undertake control measures as the weather is favourable for spraying.

Haryana

- **Major Standing Crops:** Rice (early vegetative / tillering), Sugarcane (vegetative), Horticulture crops (vegetative), Sunflower (vegetative/flowering), Early sown cotton(late vegetative/squaring stage) and Bajra(vegetative).
- There are reports of damage to standing *kharif* crops in Haryana due recent heavy rain/wind. About one thousand acres of standing crops in the villages of Ismailpur, Khera, Nadiali, Amipur, Badingan, Tangerian in the district of Ambala was submerged in water due recent heavy rains. Rain has also damaged the paddy and bajra in the mandies of Kaithal, Guhla-Cheeka, Pundri, Charki Dadri, Kharkhoda and Julana.
- As most of the districts received excess rain during last week, farmers are advised to postpone irrigation.
- Farmers are advised to continue application of top dressing of urea to bajra.
- Farmers are advised to continue sowing of *desi* varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruits crops like sweet orange, lime mango and guava utilizing the rainfall during last week and available irrigation facilities.
- As there is chance of occurrence of thrips and *pyrilla* in sugarcane, farmers are advised to monitor the crop and need to undertake control measures as the weather is favourable for spraying.

Delhi

- **Major Standing crops:** Maize (cob formation), arhar (pod formation / seed formation), bajra (grain formation) and fodder sorghum (vegetative), Sugarcane (vegetative), *Kharif* rice (flowering / milk / dough).

- As there was sufficient rain during last week over the State, postpone irrigation to the crops.
- As there is no chance of rain during next five days, farmers are advised to undertake intercultural operation to keep the crop fields weed free.
- As *kharif* rice is at flowering / milk / dough stage, maintain 3 – 5 cm of standing water at these stages of crop.
- As the weather condition is favourable, farmers are advised to prepare land and undertake sowing of *toria*.
- Prevailing weather condition is favourable to prepare land and sow raddish, turnip and carrot and also to prepare nurseries for tomato and early and medium maturing varieties of cauliflower. Select varieties from Pusa Deshi, Pusa Rashim etc. for raddish, Pusa Sweta, Pusa Kanchan etc. for turnip and Pusa Kesar, Pusa Mighali etc. for carrot for sowing.

Plant Protection

- There is chance of attack of rice bug in rice due to favourable weather condition. Farmers are advised to arrange for light trap and apply Endosulfan @ 2 ml / litre of water to control the insect.

Uttar Pradesh

- **Major Standing Crops:** Summer sugarcane (vegetative), Mango trees (fruit setting), Kharif Rice (early vegetative), *Kharif* pulses and maize (early vegetative).
- As there was sufficient rain in most of the districts during last week, postpone irrigation to sugarcane and early sown *kharif* crops. Drain out the excess water from standing crop fields as there was excess/heavy rainfall in East Uttar Pradesh.
- Undertake weeding, intercultural operations, application of fertilizers and pesticides in early sown crops like maize, til and urd.
- Topdressing of recommended amount of Nitrogen in transplanted rice may be done.
- Prepare field and undertake sowing of early varieties of potato and toria utilizing the rainfall received during last week.
- Undertake transplanting of brinjal, tomato and chillies (plains) and cauliflower in hilly region. Complete sowing of soyabean utilizing the rainfall received during last week.

J & K

- **Major Standing Crops:** Pulses (maturity/harvest), Rice (maturity/harvest), Maize (harvesting) in Kashmir division.
- As dry weather is likely to prevail for the next three days, apply irrigation to the standing crops in Jammu division.
- Undertake sowing of spinach, methi and coriander in Kashmir divisions.
- Undertake sowing of toria, radish (var. Pusa Chetki, Japanese white & Pusa Reshmi), carrot (var. Pusa Kesar), turnip (var. PTWG), garlic (var. local, large segmented), spinach (prickly seeded) and methi (P.E.B.K.methi) in Jammu division.
- Undertake harvesting of crops like rice, pulses, maize and fodder crops and vegetable crops like tomato, cucurbit and capsicum in Kashmir division.
- Arrange seeds and other inputs for taking sowing of rabi crops in Kashmir division

Plant Protection: In Jammu, weather is congenial for incidences of brown spot and blast/ sheath blight in rice; spray the crop with copper oxchloride @ 0.3% or mancozeb @ 0.25% for brown spot and carbendazim @ 0.1% for blast/sheath blight.

- Downy mildew and smut in bajra. Rogue out downy mildew and smut affected bajra plants and destroy completely to prevent further spread.
- White flies and thrips attack in chillies and bhindi crop. Spray Malathion @ 0.05% or Endosulfan 35EC @ 0.07%.
- Canker in citrus. Monitor the citrus trees and collect and destroy the affected fruits and spray Terramycin @ 1 g/10 litre of water to control the disease.

EAST INDIA [EAST UP, JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]

Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *Kharif* rice (tillering/flag leaf stage in north bihar and booting/panicle initiation in south bihar), Maize (vegetative), Pulses(vegetative)
- As Purnea, Siwan, Darbhanga, East Champaran, Kathihar, Khagadia, Madhubani, Muzaffarpur, Patna, Saharsha, Sitamarhi, West Champaran, Bhagalpur, Bhojpur, Buxar, Gaya, Supaul, Vaishali districts are experiencing stress condition due to poor rainfall for the few weeks and as some areas of North Bihar, rice crop have started to show the symptom of water stress, apply irrigation to the rice and other standing crops. Farmers are advised to not apply irrigation in the flood affected districts.
- Due to receding of flood water in some areas, crop situation in North Bihar is improving. Deposition of silt in the crop fields is observed and likely to improve the fertility of the soil. Provide drainage facilities in the already sown crops and regular agricultural operations may be continued in flood affected districts. In areas, where flood water is receding, farmers may go for sowing of early potato, wheat and lentil. The detailed contingency plan given below for flood affected areas.
 1. Where flood water recedes by 30th September: From third week of September onwards in uplands toria can be sown @ 5 kg per hectare on 30 x10 cm spacing. In medium lands, rabi crops like gram, lentil etc. and fodder maize, berseem, fodder jowar can also be sown. In sandy soils, vegetable crops like radish, palak, methi, while in medium textured soils, cabbage, turnip, carrot etc. can be sown with life saving irrigation.
 2. Where flood water recedes from 1st October onwards: The low lying areas may remain wet for a long time and therefore, Rabi sowing of wheat may be taken up with zero tillage. Likewise, lentil can also be sown. In upland areas with irrigation water available, vegetables, *rabi* maize, potato, onion, sweat potato, mustard etc. can be taken up.
- **North west alluvial plain zone:** Farmers are advised to plough the fields and start sowing of toria in the upland.
- **Flood affected North East alluvial plain zone:**
 - Application of 40 Kg/ ha nitrogen in the standing rice field may be done.
 - Undertake sowing of maize and Lucerne for fodder
 - Undertake sowing of short duration urad crop for restoration of soil and mitigate some economic loss
 - Preparation field for sowing of rabi crops may be done.
- Weather conditions are favourable for infestation of pests like stem borer, leaf roller and swarming caterpillar and disease like blast, bacterial leaf blight and sheath blight in north east alluvial plain zone. If there is damage of such insects and diseases beyond economic threshold level, apply Carbofuron in the wet soil @ 25kg/hectare. Similarly in case of attack of blast diseases spray bavistin @ 1-2gm/liter water.
- Undertake intercultural operations, spraying and application of fertilizers in rice, maize, vegetables and pulse crops in north east alluvial zone.

- **South Bihar:** Farmers are advised to prepare nursery beds for sowing of rai, toria, winter tomato, cauliflower and cabbage in south Bihar by taking advantage of realized rainfall during last week and rainfall is also expected during next five days.
- Weather is favourable for attack of insects like rice stem borer, leaf roller and swarming caterpillar and diseases like blast, bacterial leaf blight and sheath blight in rice crop. Attack of stem borer and sheath blight is reported in the rice crop. If the attack of such insects and diseases goes beyond economic threshold level, apply carbofuran in the wet soil @ 25 kg per hectare against rice stem borer, and spray monocrotophos @ 1 ml per litre of water against leaf roller and Nuvan at the rate of 0.5 ml per litre of water during evening hour to control swarming caterpillar.
- **North west alluvial plain zone:** Farmers are advised to plough the fields and start sowing of toria in the upland.
- **Flood affected North East alluvial plain zone:**
 - Application of 40 Kg/ ha nitrogen in the standing rice field may be done.
 - Undertake sowing of maize and Lucerne for fodder
 - Undertake sowing of short duration urad crop for restoration of soil and mitigate some economic loss
 - Preparation field for sowing of rabi crops may be done.
- Weather conditions are favourable for infestation of pests like stem borer, leaf roller and swarming caterpillar and disease like blast, bacterial leaf blight and sheath blight in north east alluvial plain zone. If there is damage of such insects and diseases beyond economic threshold level, apply Carbofuron in the wet soil @ 25kg/hectare. Similarly in case of attack of blast diseases spray bavistin @ 1-2gm/liter water.
- Undertake intercultural operations, spraying and application of fertilizers in rice, maize, vegetables and pulse crops in north east alluvial zone.
- **South Bihar:** Farmers are advised to prepare nursery beds for sowing of rai, toria, winter tomato, cauliflower and cabbage in south Bihar by taking advantage of realized rainfall during last week and rainfall is also expected during next five days.
- Weather is favourable for attack of insects like rice stem borer, leaf roller and swarming caterpillar and diseases like blast, bacterial leaf blight and sheath blight in rice crop. Attack of stem borer and sheath blight is reported in the rice crop. If the attack of such insects and diseases is beyond economic threshold level, apply carbofuran in the wet soil @ 25 kg per hectare against rice stem borer, and spray monocrotophos @ 1 ml per litre of water against leaf roller and Nuvan @ 0.5 ml per litre of water during evening hour to control swarming caterpillar.

Jharkhand

- **Major Standing Crops:** *Kharif* rice, arhar and Early sown maize (early vegetative).
- Farmers are advised to undertake transplanting of bringal, tomato, cauliflower with application of organic manure in the fallow upland field as early vegetable crop.
- After weeding of rice, apply 18 kg of urea in midland and 22 kg in low land as top dressing per acre in Saheibganj, Godda, Pakur, Dumka, Deoghar, Jamtara, Giridih, Dhanbad, Kodarma districts and 20 kg urea in midland, 25 kg in lowland per acre in Ranchi, Khunti, Bokaro, Hazaribag Ramgarh, Chatra, Garwah, Palamu, Latehar, Lohardagga, Gumla, Simdega districts and undertake bushening and topdressing of 25 kg Urea/acre in East Singhbhum, West Singhbhum and Saraikela.
- Undertake intercultural operations, spraying and application of fertilisers in early sown maize, arhar, urd and vegetables.

Orissa

- **Major Standing crops:** *Kharif* Rice (vegetative/panicle initiation stage and early sown crop is flowering to soft dough stage.), Sugarcane (vegetative), Maize (vegetative), cotton (early vegetative), Early sown Jute (early vegetative).
- Flood situation in Orissa worsened due to 43 new breaches on embankments in Mahanadi delta region. Several villages in the districts of Angul, Bhadrak, Bolangir, Cuttack, Gajapati, Jajpur, Jagatsinghpur, Kendrapara, Keonjhar, Boudh, Kalahandi, Khordha, Puri, Nayagarh, Rayagada,

Subarnpur and Sambalpur are reported to have been inundated and affected severely. About 4.5 lakh ha crop area has also been damaged so far. Lodging of rice crop in coastal districts is occurred due to flooding.

- As rain is likely at many places in coastal areas of Orissa during next 24 hours, postpone irrigation to the standing crops. Also provide adequate drainage facilities in all the districts of the State as excess / heavy rainfall received during last week.

Coastal Orissa:

- In flood affected up-medium lands, sowing of pre-*rabi* crops and *rabi* groundnut may be undertaken after the rain. Complete sowing of pre-*rabi* crops such as niger, castor, sesame and pulses.
- As early sown green gram, black gram and ground nut crops are at maturity stage, start harvesting by picking up pods in case of green-gram and black-gram as soon as possible as the wet period is likely to continue.
- The wet period since last few days may aggravate infestation of insects like stem-borer, leaf folder, case-worm and diseases like blast, bacterial leaf blight and sheath blight in rice and pod borer and red and black caterpillar in pulses and groundnut etc.
- Medium duration rice and early sown rice are at panicle initiation stage. Apply 6 to 8 Kg. Nitrogen / acre.

Interior Orissa:

- There is incidence of leaf folder and case worm in paddy in Western central table land zone. Apply Monocrotophos @ 2 ml / litre of water or Chloropyriphos @ 2 ml / lit of water.
- Postpone application of fertilizers, spaying and undertaking of weeding as rain is likely at many places in coastal Orissa during next 24 hours and continue the above operations in interior Orissa.

West Bengal

- **Major Standing Crops:** Sugarcane (vegetative), jute (maturity / harvesting), *Aus* rice (grain maturity / harvesting), *aman* rice (tillering / panicle initiation).
- As rain / thundershowers are likely at many places over the State during next 24 hours, postpone irrigation, intercultural operation and application of fertilizer to the crops.
- As there is possibility of rainfall, postpone harvesting of *aus* rice.
- Prepare land and undertake transplanting of seedlings and sowing of seeds of winter vegetables like radish, spinach and broccoli etc. after current spells of rain.
- After harvesting of *aus* rice and jute, using stored soil moisture due to rainfall during last couple of weeks, the farmers are advised to sow seeds of rainfed toria and mustard after current spells of rain. Sow early varieties of toria like Agrani, Panchali etc. and white-mustard like Binoy, Subinoy etc.
- Also start sowing of improved varieties of moong like Sonali, Panna, Panthmoong, Pusa-Baisakhi, Sunayana, Amrit, Sujata, Jyoti etc. in line after current spells of rain. Two to two and a-half Kg seeds are required to sow one bigha land.

Plant Protection:

- Due to cloudy weather and rainfall for last few days there is a chance of enhanced attack of brown spot and blast disease in *aman* rice under the prevailing weather condition in New Alluvial Zone. Apply 2 gm Mancozeb per lt of water to control brown spot disease. To control blast disease, apply 1 ml Hinosan or 1 gm Carbendazim per litre of water.

Sikkim

- **Major Standing Crops:** Orange (fruiting/harvesting), large cardamom (capsule development / maturity), ginger (late vegetative), maize (harvesting), rice (active tillering).
- As rain/thundershower are likely at isolated places over the State, apply irrigation to orange, large cardamom, ginger and vegetable crops.
- This is proper time for sowing of rabi vegetable crops like cabbage, cauliflower, carrot, Chinese cabbage, knol-khol, garden peas radish, turnip, lettuce, celery, spinach, etc in medium and low hills. Undertake land preparation and sowing of the vegetable crops in the nursery when the temperature is in the range of 15-20°C.
- **Plant Protection:** Chirke and foorkey infected large cardamom plants may be destroyed by uprooting / burial at regular intervals in the pits. Regular inspections may be carried out to observe caterpillar/shoot borer/shoot fly incidence if any and may be hand picked and destroyed mechanically. 1% Bordeaux mixture or copper oxychloride @ 3gm/ltr of water may be sprayed to the cardamom plants to protect from fungal diseases.
- Weather conditions are congenial for mild incidences of fruit fly in orange. Monitor the trees and apply Sevin baits to control the pest.
- Monitor ginger for bacterial wilt in Medium and High hills and collect and destroy the affected plants completely to prevent further spread of the disease. Arrange for drainage facilities to prevent rhizome rot during spells of rain.

NORTHEAST INDIA [ARUNACHAL PRADESH, NMM & T, ASSAM, MEGHALAYA]

Assam

- **Major Standing crops:** Sugarcane (vegetative), arhar (vegetative), already transplanted *sali* rice (tillering), vegetables (sowing / vegetative / flowering / fruiting).
- Recent flood in Assam caused substantial losses of crops in 16 districts especially *ahu* and *sali* rice, vegetables, jute etc. Kamrup, Dhubri, Goalpara, Dibrugarh, Sonitpur, Nalbari, BARPETA, Lakhimpur, Dhemaji, Morigaon, Nogaon and Dibrugarh are the worst affected districts in the wave of flood.
- As rain / thundershowers are likely at a few places over the State during next 48 hours and at many places thereafter, postpone irrigation to the crops.
- Farmers are advised to collect the *sali* rice seeds of the varieties like Disang, Luit, Kapili, IR -50 and Sonamukhi and to go for direct sowing during this month in flood affected areas after receding of flood water. For one bigha land, 7-8 kg seeds are required.
- Seeds of black gram varieties like T-9, Pant U-19, Saonimah (SB-121) and green gram varieties like T- 44, Pratap, AAU-39 may be sown in the field where *sali* rice is completely damaged during recent flood.
- This is also proper time for sowing of sesamum, black gram, green gram and toria in other areas.
- As there is chance of rainfall at many places over the State after 48 hours, farmers are advised for weeding and topdressing of urea fertilizer immediately in *Sali* rice at maximum tillering stage. For top dressing, apply 3 kg urea per bigha for high yielding and 1.5 kg per bigha for local tall varieties.
- Prepare land and sow cauliflower, cabbage, raddish, brinjal, tomato, knolkhol etc.
- As this is proper time, prepare upland for sowing of early varieties of *rabi* groundnut. The seeds can be sown up to mid October.

- Prepare land and undertake planting of early varieties of potato.
- Details of crop varieties are mentioned in Annexure I.

Plant protection:

- Farmers are advised to apply plant protection measures after current spells of rain.
- The *sali* rice which is at tillering stage may be infested by Hispa in North Bank Plain Zone. As local method, farmers may apply cow dung solution (mixed with water) in the main field. As chemical treatment, farmers are advised to apply any one of the insecticides like Dimecron / Phosphomidon / Chloropyriphos @ 2 ml per litre of water.
- Present weather is favourable for occurrence of blast disease in *sali* rice in Upper Bramhaputra Valley Zone. To control the disease spray Kitazin @ 1 ml / litre of water.

Animal Husbandry:

- The farmers who have not vaccinated their domestic live stocks like cattle, goat and pigs, should vaccinate against Foot and mouth disease as well as anthrax disease. They should not be fed with water submerged rotted grasses and fed with anti worm drugs.
- After flood, Cholera, Chabaka, Anthrax, Galphula etc. diseases may occur in the animals. The deceased animals due to these diseases should be buried in the soil to avoid further spreading of the diseases. For worm related problem the animal should be fed with the medicine ‘Piperzine’ three times in a month.

Fishery:

- Fisheries should be well protected with nylon nets in view of flood situation.

Arunachal Pradesh

- **Major Standing crops:** Ginger (rhizome formation), Vegetables (harvesting), Wet seeded rice (flowering/grain formation), Jhum rice (grain formation), Millets (grain formation) and maize (maturity).
- As there was insufficient rainfall in most of the districts during last week and rain/thundershower are likely at a few places over the State during next 48 hours, apply irrigation to the standing maize (cob formation), millet and ginger crops.
- Farmers are advised to continue land preparation and sowing of rapeseed & mustard, pea and winter cole vegetables by utilizing the realized rainfall during last week and also rainfall is likely at isolated places over the State.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]

Andhra Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), Rice (vegetative), Chillies (vegetative)
- As rain/thundershower are likely at isolated places over the State, apply irrigation to the standing crops.

Coastal AP

Plain Land

- Farmers in Srikakulam are advised to start harvesting early sown black gram, green gram, ragi, sesamum and maize crops as conducive weather prevails during these days.
- Farmers in the remaining districts are advised to undertake intercultural operations in khairf crops due to conducive weather.

- **Plant Protection:** Weather conditions are congenial for
- moderate to severe attack of blast and sheath blight in rice in Srikakulam, Vijayanagaram and Visakappattinam districts; undertake plant protection measures to control the diseases.
- BPH and blast in rice in Krishna district; spray Ethephenphos @ 2 ml/litre of water to control BPH and spray Tricyclozole @ 0.6 g/litre of water to control blast.
- tobacco caterpillar and bacterial leaf spot in pulse crops; spray Chloropyriphos @ 2.5 ml/l or Acephate @ 1.0 g/l of water to control the larvae at early stage. For the control of the grown up larvae, undertake poison baiting with rice bran, jaggary and Chlorpyriphos/ Monocrotophos @10:1:1 ratio. For the control of bacterial leaf spot in pulse crops like green gram and black gram, spray Copper oxychloride @ 3 g/l + Streptocyclin @ 0.1 g/l of water.
- aphids, mealy bugs and jassids in cotton; spray Monocrotophos in 1:4 or Imidaclopride in 1:20 ratio with water and also at 20, 40 and 60 days after sowing to control the pests.
- stem borer in maize; spray Carbofuran 3G @3 kg/acre.
- whitefly, red rot and wilt in sugarcane in Krishna district; undertake plant protection measures to control the pests and diseases.

High Altitude Areas

- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to continue sowing of pulse crops like rajma and niger.
- **Plant Protection:** Attack of blast is reported in paddy and ragi. Farmers are advised to undertake plant protection measures to control the disease.

Rayalaseema

- Farmers in all the districts are advised to go for intercultural operation in early sown *kharif* crops as conducive weather prevails during these days.
- Farmers in Anaparthi and Kurnool are advised to complete transplanting of rice and planting of new orchards (papaya, ber, custard apple, mango and banana).
- **Plant Protection:** Attack of leaf folder in paddy and spotted wilt in tomato is reported in Chittoor district. Farmers are advised to undertake plant protection measures to control the pests and diseases.

Telangana

Farmers in Karimnagar, Nizamabad and Adilabad districts are advised to undertake intercultural operations and application of fertilizers and pesticides in early sown crops.

- **Plant Protection:** Attack of stem borer is reported in rice. Spray Carbofuran @ 10 kg/acre to control the pest.
- Weather conditions are conducive for mild incidences of –
 - Spodoptera in soyabean in Adilabad; undertake plant protection measures.
 - mealy bug in cotton; spray Dichlorvas @ 1 ml/litre of water.

Karnataka

- **Major Standing Crops:** Annual sugarcane (tillering), Early sown Kharif crops (vegetative).

Coastal Karnataka

- As there was no significant rainfall during last week and rain/thundershower are likely at a few/ isolated places over the State, farmers in Udupi, Uttar Kannada and Dakshin Kannada are advised to apply irrigation to plantation crops (arecanut, coconut, cashew and banana)
- Farmers in Udupi and Dakshin Kannada districts are advised to undertake intercultural operations in early transplanted rice, arecanut, coconut, cashew and banana. Apply FYM @ 15-30 kg/tree in addition to fertilizers to plantation crops.

Plant Protection: Due to cloudy weather, leaf folder and case worm may attack rice. Monitor the crop for the pests and undertake plant protection measures.

- Due to high humidity in Udupi, Uttar Kannada and Dakshin Kannada districts, Colerago may attack arecanut. Monitor the crop and spray Bordeaux mixture @ 1%.

North Interior Karnataka

- Due to receipt of light rains in Bellary, Bijapur, Bagalkot and Koppal districts during last week, farmers are advised to undertake sowing of sunflower in red soils and shallow black soils; sunflower and cotton in medium to deep black soils.
- Farmers in Bidar region are advised to undertake sowing of sunflower (till September end), rabi jowar and safflower (September 15th to October 15th), rainfed wheat (October 1st – 15th), irrigated wheat (October 15th to November 15th) and Bengal gram (October and November) with realized rainfall during last week. Also undertake sowing of vegetable crops like brinjal, tomato, cabbage and cauliflower in the nursery.
- In view of light rainfall received during last week, farmers in Gulbarga district are advised to continue sowing of sunflower (KBSH 1, RSH 1, SP 275, SP244 and Darsa Kaveri).
- Farmers in Bijapur, Chitradurga and Shimoga are advised to undertake sowing of jowar, Bengal gram and safflower for rabi season. Select among A1 and GBS 964 for Bengal gram and A1, S-144 for safflower.

Plant Protection: Due to cold and cloudy weather conditions, attack of sucking pests in cotton, leaf eating caterpillars and leaf spot in groundnut and thrips, mites and murda-complex disease in chillies is reported in Dharwad district. Also necrosis is noticed in sunflower. Spray Dimethoate @ 1.7 ml to control sucking pests in cotton, Methyl Demeton @ 1 ml/litre of water to control eating caterpillars and Chlorothalonil @ 0.2% to control leaf spot in groundnut. Spray 1.7 ml Roger or 1.5 ml Metasystox +2.5ml Dicofol per liter of water to control thrips, mites and murda-complex disease in chillies. To control sunflower necrosis, spray Imidachloprid 17.8 S.L @ 0.25 ml or Oxidematon 25 EC @ 1.5 ml per liter of water.

- Weather conditions are favourable for mild incidences of:
- citrus canker in Bijapur; spray Streptomycin Sulphate (0.5 g) + Copper oxi-chloride (2g)/liter of water.
- sucking pests in early sown Bt cotton in Gulbarga; undertake plant protection measures to control the pests.

South Interior Karnataka

- Farmers in Bangalore, Kolar and Tumkur are advised to undertake intercultural operations and application of fertilizers in early sown crops due to conducive weather. Undertake gap filling in millets to maintain optimum plant population. Apply Gypsum @ 200 kg/acre in 30 days old groundnut.
- Farmers in Mysore and Tumkur districts are advised to undertake sowing of ragi (GPU 28 and Indaf 5), sunflower (KBSH 41 and 44), maize (NAC 6004 and NAC 6002 varieties and Nityashri hybrid) and short duration pulses like green gram, black gram, cowpea and horse gram during this month; undertake transplanting of rice (Thella, Hamza, KRH 1, Mangala, Mukthi, Bilimukthi and Rasi) and planting of sugarcane (CO varieties – 419, 62175, 7804, 8371 and 86032) with the canal water.
- **Animal Husbandry:** Undertake vaccination against FMD and Anthrax in cattle in Bangalore, Kolar and Tumkur.

Plant Protection: Due to cloudy weather conditions in Mysore and Tumkur districts, attack of blast is reported in rice and ragi nursery. Spray Hinosan or Kitacin @ 1 ml/litre of water to control the disease.

- There are chances of Tikka leaf spot in groundnut, sucking pests like thrips, aphids and white fly in cotton, stem borer in maize, blast in rice and rhizome rot and soft rot in ginger in Shimoga. Farmers are advised to monitor the crops for the pest and disease and spray Carbendazim 2.1 g/litre of water to control rice blast and Tikka leaf spot in groundnut. Spray Emidochloprid @ 0.6gm/ltr of water to control sucking pests in cotton Spray Ridomil MZ @ 2g/litre and Streptocycline @ 0.5g/litre to control rhizome rot and soft rot in ginger.

Kerala

- **Major Standing Crops:** *Virippu* rice (grain maturity/harvesting), *Mundakan* rice (nursery) and Plantation crops (Coconut, Arecanut, Pepper and Cashew).
- Rain/thundershowers are likely to occur at isolated places for the next three days, farmers are advised to apply irrigation to plantation crops.
- This is proper time for sowing of chillies, brinjal, amaranthus and tomato in the nursery and direct sowing of gourds and bhindi in the main field in Malappuram, Kasargod, Kozhikode and Kannur districts. Undertake land preparation and sowing of the crops.
- This is proper time for sowing of *mundakan* rice in nursery in Thiruvananthapuram, Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts. Select among Mangala, Mashurie, H-4 and Karuna (long duration varieties). Select among Matta triveni, Kanjana, Jaya, Athira and Aiswarya (short/medium duration varieties) where water availability is not sufficient to raise long duration rice. Complete harvesting of *virippu* rice.
- Farmers in Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts are advised to undertake planting of Nendran banana. Undertake intercultural operations and application of fertilizers in plantation crops (coconut, arecanut, pepper and cashew).
- Farmers in Thrissur district are advised to undertake sowing of tomato and capsicum. Select among California, Hungarian wax and Wonder for sowing capsicum.

Plant Protection: Weather conditions are favourable for the attack of

- gall midge, leaf folder and stem borer in rice nursery in Thrissur; undertake plant protection measures water to control the pests.
- stem bleeding in coconut and blight in cashew in Malappuram, Kasargod, Kozhikode and Kannur districts. Spray Calyxin @ 5 ml/litre to control stem bleeding and 1% Bordeaux mixture to control blight.
- foot rot in black pepper; spray Copper oxy chloride @ 1% to control the disease.
- mahali disease in arecanut in Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts; apply 1% Bordeaux mixture to control the disease.

Tamilnadu

- **Major Standing Crops :** Rice (*Kuruvai*) (tillering/panicle initiation), Early, Mid Sugarcane (cane maturity stage), Special season sugarcane (grand growth stage), Sorghum (flowering), Cotton (boll maturity/picking stage)
- Apply irrigation to groundnut, sugarcane and pulse crops as there was no significant rainfall during last two weeks and there are no chances of rainfall over the State during next five days.
- Undertake intercultural operations and application of fertilizes and pesticides in Kuruvai rice in Thanjavur, Trichy, Karur, Nagappattinam and Perambalur districts due to conducive weather.
- Undertake sowing of bhindi, Dolichos, chillies and cowpea in Chennai, Cuddalore, Kanchipuram, Thiruvarur, Thiruvannamalai, Vellore and Villupuram districts using irrigation water.
- Farmers in Thirunelveli, Tuticorin and Virudunagar are advised to undertake sowing of chillies in nursery.
- Due to rainy conditions in Chennai, Cuddalore, Kanchipuram, Thiruvallur, Vellore, Villupuram, increase in vector activity resulting in a slight rise in arthropod borne diseases particularly blood protozoans like Anaplasmosis, Theileriosis and Trypanosomiasis and viral disease such as blue tongue amongst farm animals is expected. Undertake vector control for ticks and flies and midges under the guidance of veterinarians. Also avoid stagnation which can allow for fly and midges breeding sites.

Also undertake prophylactic drenching with appropriate medication, for fluke infections like amphistomiasis and liveflukes.

Plant Protection: Present weather is conducive for mild incidences of stem borer, gall midge, thrips, blast and tungro in paddy in Thiruvallur district. Apply Carbofuran @ 12 kg/acre to control the pest and diseases.

- Weather conditions are favourable for mild incidences of internode borer in sugarcane and fruit borer in bhindi in Kovilpatty, Thirunelveli, Tuticorin and Virudunagar districts. Use *Trichogramma chilonis* @ 1 cc/acre to control the pests.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

- **Major Standing Crops:** Sugarcane (pre-seasonal) (elongation / cane development), sugarcane (*Suru*) (active growth / elongation), irrigated cotton (squaring / boll formation in Nasik, Pune and Latur divisions and squaring in Aurangabad division), *kharif* groundnut (pegging / pod formation in Nasik, Kolhapur & Pune, flowering/ pegging in other parts of the State), *kharif* cotton (squaring / boll formation in Nasik, Latur, Amravati and Nagpur divisions and Ahmednagar district and squaring in Aurangabad division), *kharif* rice (flowering / grain formation in Konkan, panicle initiation / flowering in Pune, Nashik and Kolhapur divisions and active tillering in other parts of the State), soybean (pod maturity / harvesting in Kolhapur and pod formation / pod maturity in other districts), tur (vegetative / branching), sunflower (flowering), black gram and green gram (pod maturity / harvesting).
- As there was good rain during last couple of weeks in most of the districts of the State, postpone irrigation to the standing crops.
- As rain is not likely to occur during next five days, apply irrigation to maintain 3 – 5 cm water in *kharif* rice field.
- The weather is favourable for carrying out intercultural operation to keep the crop fields weed free.
- Weather condition is conducive to apply third dose of Nitrogenous fertilizer (440 g Urea / Are) to *kharif* rice and also to apply 870 gm Urea per Are in finger millet in Konkan and in Sub Montane zone.
- As the prevailing weather condition is favourable, this is proper time for sowing of *rabi* jowar in Pune, Solapur and Ahmednagar. Select varieties from Maldandi 35-1, RSV-833, Selection-3, Phule Yeshodha & Mauli. Mauli variety gives good result in the medium soil. Use 10 kg seeds per hectare for sowing.
- Under prevailing weather condition, undertake harvesting of matured soybean in Kolhapur and Amravati division and picking of matured pods of green gram and black gram in Pune, Kolhapur, Latur, Aurangabad and Amravati division.

Plant protection

- In cotton, there is chance of occurrence of mealy bug, aphids and jassids in Nasik and aphids and jassids in Aurangabad due to favourable weather condition. To control mealy bug in cotton, spray *Verticillium lecanii* or *Metarizium annesopli* bacteria @ 40 gm in 10 liters water. If infestation is more, spray 75 % Acipheth @ 30 gm or 76% Dichlorovos @ 20 ml or 40% Trizophos @ 20 ml in 10 liters of water. To control aphids & jassids in cotton, spray 5 % Neem extract or 35 % Endosulphan @ 14 ml or 30 % Dimethoate @ 10 ml in 10 litres of water.

- There is chance of infestation of blast disease in *kharif* rice in Thane, Raigad, Sindhudurga districts and Nagpur and Kolhapur division. For control blast, spray Carbendazim @ 1 g / litre or Copper oxy chloride @ 2.5 g / litre of water.
- There is report of infestation of stem borer in *kharif* rice in Thane, Raigad, Sindhudurga, Nashik & Ahmednagar districts. Use 10 G Foret (Granular) or 5 G Quinolphos powder @ 15 kg / ha or spray 50 % Fenitrothion @ 800 ml / ha in 500 liters water to control stem borer.
- Infestation of tobacco caterpillar in soybean is reported in Nagpur, Wardha, Bhandara, Chandrapur and Gadchiroli districts of Vidarbha. Soybean crop in 270444 ha area in Nagpur division has been affected due to tobacco caterpillar infestation. The intensity of infestation is reducing gradually. Monitor the crop for the pest and spray Chlorpyriphos @ 2 litres / ha.

Gujarat

- **Major Standing Crops:** Sugarcane (cane development), *Kharif* groundnut (pegging / pod formation), *Kharif* cotton (flowering / boll formation), *Kharif* rice (panicle initiation / flowering), Maize (cob formation / maturity), Bajra (grain formation / maturity) and other *kharif* crops (vegetative / flowering).
- Due to heavy rainfall during last couple of weeks flood situation occurred in some parts of Surendranagar, Jamnagar, Amreli and Rajkot districts in North Saurashtra region during last week. Cotton crops at boll formation stage may be affected due to heavy rain in these areas. Arrange for draining out excess water from the crop fields in these districts.
- As there was sufficient rain in remaining districts during last couple of weeks, farmers are advised to postpone irrigation to the crops in these districts.
- As there is no possibility of rain, farmers are advised to undertake intercultural operation to keep the crop fields weed free.
- Prevailing weather is conducive to start harvesting of already matured crops of maize and bajra.
- As weather condition is favourable, farmers are advised to sow castor and pigeon pea in South Gujarat (Heavy rainfall) Zone and also to transplant brinjal and chilli in the main field. Adopt seed rate of 5-6 kg per hectare for castor. Farmers may select castor varieties from GCH-4, GCH-5 and GCH-6.

Plant protection

- There is chance of infestation of white fly in cotton in Middle Gujarat region. To control white fly, spray neem oil based pesticides like Neemadrin or Phosphamidon @ 25 ml in 10 litres of water solution.
- There is chance of infestation of white and brown plant hopper in *kharif* rice in Middle Gujarat region. To control white and brown plant hopper, dusting of Carbaryl 10% powder @ 20-25 kg / ha is recommended at low moisture condition.

Animal Husbandry

- Give 200 g common salt dissolved in warm water to cattle for controlling diarrhea and constipation.

Rajasthan

- **Major Standing Crops:** Groundnut, bajra, jowar, maize, sesame, cluster beans, red gram, cotton, vegetables. All the crops are at flowering/grain formation stage. This is proper time for sowing rabi crops.

- As there was no significant rainfall during last week in the state except in Alwar, Baran, Bharatpur, Bundi, Chitorgarh, Dausa, Jhalwar and Jhujnjhunu in East Rajasthan, apply irrigation to the crops. Postpone irrigation to the crops in the above districts as there was excess rainfall during last week.

East Rajasthan

- Farmers in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur are advised to complete planting of mango, guava, lime, ber, aonla, pomegranate and karonda etc..
- This is proper time for sowing of mustard in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur districts. Undertake land preparation and sowing of mustard. Select among Pusa gold, Maya, Vasundhara, PR 15, 45, Bio 902, NRCSB 506, 101 and Varuna.
- This is proper time for sowing of radish (Pusa Rasmi), carrot, mid cauliflower and winter brinjal in Ajmer and Tonk. Undertake land preparation and sowing of the crops. Before sowing treat the seeds with Thiram @ 2.5 gm per kg seeds.
- Undertake field preparation and sowing of rainfed taramira, toria and pea in Alwar, Tonk, Dausa and Jaipur. Farmers are advised to procure seed, fertilizers and chemical in advance for the sowing of same crops. Select among Arkil, Hara bona, VL-3, Jawahar Matar-4 and Matar Ageti-6 for pea.
- Due to high wind conditions in Udaipur, tie up maize and sorghum to prevent the crop from lodging.
- Vaccinate the cattle to save from infections against FMD in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur.

Plant Protection: Weather conditions are favourable for mild incidences of

- Tikka leaf spot in groundnut in Alwar, Dholpur, Bikaner and Jaisalmer; spray Carbendazim @ 500 ppm.
- white fly and jassids in cotton in Alwar and Dholpur; spray Dimethoate or Methyl Demeton @ 1 litre/ha.
- shoot borer in jowar in Alwar, Bharatpur, Karauli, Sawai Modhpur; spray Endosulphan 35 EC @ 1.25 litre/ha.
- Downy mildew disease in pearl millet crop (at panicle initiation stage) in Alwar, Bharatpur, Karauli, Sawai Modhpur; spray Zineb @ 2.5 kg or Mencozeb @ 2 kg per hectare and 2-3 times at an interval of 3 days.
- stem borer in maize in Karauli, Alwar, Dholpur, Sawai Modhpur; spray Endosulphan 35 EC @ 1.25 litre/ha.
- white fly in soyabean and sucking pests in vegetable crops in Banswara; spray Dimethoate @ 2 ml/litre of water.

West Rajasthan

- Farmers in Barmer, Churu, Jalore and Jodhpur are advised to undertake sowing of rabi crops during these days. Select among Pusa kalyani, T-59, Varuna, Pusa Gold, RH 30A, PR-15, Bio-902, Pusa Jai Kisan for mustard. Farmers in Sriganaganagar and Hanumangarh may select among Pusa Gold, RGN 13, RGN-48, Varuna T-59 laxmi and RH 8812 varieties of mustard.
- Undertake sowing of sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Barmer, Churu, Jalore and Jodhpur with a possibility of light rains during next five days.
- Undertake intercultural operations and application of fertilizers in crops in Barmer, Churu, Jalore and Jodhpur.
- Farmers in Sriganaganagar and Hanumangarh are advised to undertake sowing of Kino during this week.

Plant Protection: Weather conditions are favourable for mild incidences of

- leaf eating caterpillar in fruits and vegetable crops in Barmer, Churu, Jalore and Jodhpur; spray Qunalphos @ 1.5 kg or Endosulphan @ 4.25 kg/hectre.
- pink boll worm in cotton, green bug in moong and white fly in sugarcane in Sriganganagar and Hanumangarh; undertake plant protection measures.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (vegetative/flowering), maize (vegetative/silking / tasseling), cotton (vegetative) and vegetable crops (nursery/transplanting).
- As there was excess rainfall in the sate during last week except in Katni, Rewa, Tikamgarh and Sagar in East Madhya Pradesh and Badwani, Dewas, Dhar, Jhabua, Mandsaur, Neemuch, Rajgarh and Ratlam in West Madhya Pradesh, postpone irrigation to the crops. As there was no significant rainfall in the above districts during last week, apply irrigation to the crops.
- Farmers in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts are advised to arrange seeds and other inputs for undertaking sowing of *rabi* crops.
- Prepare land for sowing of lentil in Gird zone covering Morena, Bhind, Gwalior, Shivpuri Guna Sheopur and Ashoknagar districts.
- Undertake land preparation and planting of vegetables like mid cauliflower, potato and field pea in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts and cauliflower in Bhind, Gwalior, Shivpuri Guna Sheopur, Ashoknagar. Also undertake planting of guava, citrus, mango and anola during this period.
- **Animal Husbandry:** Provide proper ventilation and clean water to cattle and arrange for vaccination to save them from infectious disease in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. Create smoke during the night in cattle shade to prevent cattle from mosquitoes and bees.
- **Poultry:** Due to possibility of Coccidiosis in poultry birds in Sehore, maintain sanitation and aeration in the sheds.

Plant Protection: Weather conditions are favourable for

- Sucking pests in fruits and vegetable crops in Jabhua hills zone, spray Methyl Dimethon 25 EC 1 ml/litre. Also fruit borer in tomato; spray Tricophos @ 2 ml/litre of water.
- Leaf eating and sucking pests on Soyabean, black gram and green gram, with grain eating insects in gird zone. For control spray 500 ml of Methyl Parathyon 50 in 500 litre water /ha or sprinkle Methyle Parathyon (2%) powder 15 to 20 Kg /ha.
- Green leaf hopper in maize and sucking pests in vegetable crops. Apply Phorate to control green leaf hopper and spray Methyl Demeton @ 1 ml/litre of water to control sucking pests.
- Tikka leaf spot in groundnut in Khargone, Khandwa and Harda districts. Spray Mancozeb @ 2 g/liter of water. Also semilooper and girdle beetle in soybean; spray Traizophos 40 EC @ 2 ml/litre of water.
- Stem borer in maize and jowar; apply Phorate 10 G @ 8-10 granules/plant.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), Soybean and black gram (flowering / pod formation), groundnut (flowering / pegging / pod formation), *kharif* rice (panicle initiation / flowering / milk), pigeon pea, green gram and sesame (vegetative / flowering / pod formation).
- As there was sufficient rain during last couple of weeks in most of the districts of Chhattisgarh, farmers are advised to postpone irrigation to the crops.

- As there is no possibility of rain, weather condition is conducive to undertake intercultural operation to keep the field weed free.
- As prevailing weather condition is favourable, this is proper time to prepare nurseries of tomato, chilli, brinjal and also early varieties of cabbage and cauliflower. This is also proper time for preparation of land and transplanting of tomato, chilli and brinjal if nurseries are ready.

Plant protection

- Incidence of stem borer and rice bug may occur in *khariif* rice due to favourable weather condition, hence it is advised to keep watch over the crop and install light trap for initial control. If the incidence is higher, apply Carbofuron 3 G @ 10 kg / acre.
- Under present weather conditions incidence of blast may occur in rice crop. Hence, it is advised to keep watch over the crops and in case of higher incidence spray Saaf or Beam @ 1 ml/liter of water.

Annexure I

Crop varieties of Assam

- **Direct seeded *sali* rice varieties for sowing in flood affected areas:** Disang, Luit, Kapili, IR –50 and Sonamukhi.
- **Black gram varieties for sowing in the field of *sali* rice completely damaged during recent flood:** T-9, Pant U-19, Saonimah (SB-121).
- **Green gram varieties for sowing in the field of *sali* rice completely damaged during recent flood:** T- 44, Pratap, AAU-39.
- **Black gram in other areas:** T-9, T-27, Pant U-19, T-122 etc.
- **Green gram in other areas:** T-44, Koper Gaon, ML-56, ML-131.
- **Sesamum:** Madhabi, Gauri, Binayak, Punjab Til No-1 etc..
- **Toria:** TS-27, TS-25.
- **Cauliflower:** Improved Japanese, Pusa Synthetic, Pusa Snowball, Pusa Ketki etc.
- **Cabbage:** Golden Acre, Pride of India, Pusa Mukta etc.
- **Raddish:** Pusa Himani, Pusa Deshi etc.
- **Brinjal:** Pusa Kranti, Pusa Purple Long, Pusa Purple Round, JC-1, JC-2 etc.
- **Tomato:** Punjab Chhuhara, Punjab Kesri, Sioux, Pusa Ruby, Arka Abha, Arka Alok, Arka Abhijit, BT-1, Bilahi-1, Bilahi-2.
- **knolkhol:** White Vienna.
- **Early variety of *rabi* groundnut:** JL-24.
- **Early varieties of potato:** Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri etc.