



# ***National Agromet Advisory Service Bulletin***

**based on**

**Extended Range Weather Forecast**

**Valid for 28<sup>th</sup> August to 11<sup>th</sup> September, 2014**

**Date of Issue: 28<sup>th</sup> August, 2014**

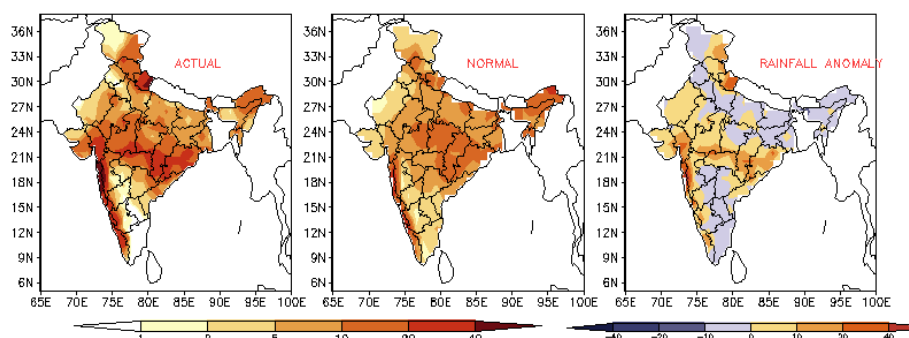
**Issued by**

**Earth System Science Organisation  
Agricultural Meteorology Division  
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**Indian Institute of Tropical Meteorology, Pune  
&**

**Indian Council of Agricultural Research  
AICRPAM, CRIDA, Hyderabad**

## Realized Rainfall (14<sup>th</sup> August to 27<sup>th</sup> August)



During last two weeks many parts of Konkan & Goa received an average rainfall of more than 40 mm/day. Many parts of Uttarakhand, Odisha, Chhattisgarh, Gujarat region, Coastal Karnataka and Kerala and some parts of Madhya Maharashtra and South Interior Karnataka received an average rainfall of 20-40 mm/day. Many parts of Sikkim, Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, West Madhya Pradesh, Saurashtra and Vidarbha and some parts of East Rajasthan, East Madhya Pradesh and Coastal Andhra Pradesh received an average rainfall of 10-20 mm/day. Many parts of Uttar Pradesh, West Bengal, Mizoram, Tripura, Bihar and Jharkhand and some parts of Assam, Punjab and Telangana received an average rainfall of 5-10 mm/day. Many parts of North Interior Karnataka, Marathwada, Kutch region, West Rajasthan, Haryana, Meghalaya, Manipur and Nagaland and some parts of Rayalaseema received an average rainfall of 2-5 mm/day. Mainly dry weather prevailed over rest of the country.

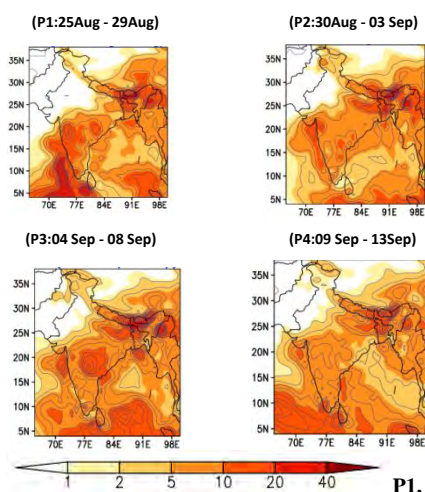
## Monsoon Watch

The southwest monsoon was active over Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh and North Interior Karnataka on 27<sup>th</sup> August, 2014.

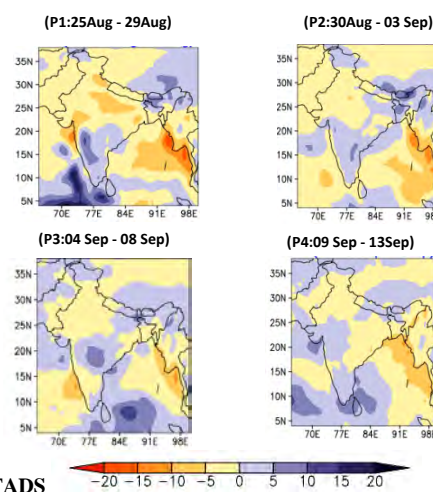
## Extended Forecast System (based on CFS model)

### Rainfall forecast for 4 pentads

#### Rainfall Forecast Actual (mm/day)



#### Rainfall Forecast Anomaly (mm/day)



P1, P2, P3, P4: PENTADS

**First pentad (25 Aug-29 Aug):**

Rainfall of about 10-20 mm/day is likely over Sub-Himalayan West Bengal & Sikkim, many parts of Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Karnataka, North Interior Karnataka and Kerala, some parts of Chhattisgarh. Rainfall of about 5-10 mm/day is likely over many parts of Mizoram, Tripura, Vidarbha, Coastal Andhra Pradesh, Telangana, Rayalaseema and South Interior Karnataka, some parts of Bihar, Jharkhand, Odisha and Tamil Nadu. Rainfall of about 2-5 mm/day is likely over many parts of East Madhya Pradesh, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Gangetic West Bengal and South Gujarat Region. Mainly dry weather would prevail over rest of the country.

**Second pentad (30 Aug-03 Sep):**

Rainfall of about 10-20 mm/day is likely over many parts of Sikkim, Sub-Himalayan West Bengal, Jharkhand and Gujarat region and some parts of Assam & Meghalaya, Manipur, Nagaland, Gangetic West Bengal, East Uttar Pradesh, Bihar, Telangana and Rayalaseema, rainfall of about 5-10 mm/day is likely over many parts of, Konkan and Goa, Karnataka, Kerala, Coastal Andhra Pradesh, Maharashtra, Saurashtra, Chhattisgarh, East Madhya Pradesh, Odisha, Mizoram and Tripura and some parts of Bihar, rainfall of about 2-5 mm/day is likely over many parts of Jammu & Kashmir, West Uttar Pradesh, Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Kutch and Tamil Nadu. Mainly dry weather would prevail over rest of the country.

**Third Pentad (04 Sep-08 Sep):**

Rainfall of about 20-40 mm/day is likely over some parts of Sub-Himalayan West Bengal & Sikkim, Nagaland and Manipur, rainfall of about 10-20 mm/day is likely over many parts of Arunachal Pradesh, Bihar, Chhattisgarh, Vidarbha, Marathwada, Coastal Andhra Pradesh and Telangana, some parts of Assam & Meghalaya and East Uttar Pradesh, rainfall of about 5-10 mm/day is likely over many parts of Mizoram, Gangetic West Bengal, Jharkhand, Odisha, East Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Karnataka, Rayalaseema, Tamil Nadu and Kerala, some parts of Tripura and South Gujarat, rainfall of about 2-5 mm/day is likely over many parts of Jammu & Kashmir, West Uttar Pradesh, Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Middle and North Gujarat and some parts of Kutch. Mainly dry weather would prevail over rest of the country.

**Fourth Pentad (09 Sep-13 Sep):**

Rainfall of about 10-20 mm/day is likely over Sub-Himalayan West Bengal & Sikkim, some parts of Nagaland, Manipur, Bihar and Kerala, rainfall of about 5-10 mm/day is likely over many parts of Arunachal Pradesh, Assam, Meghalaya, Tripura, East Uttar Pradesh, Gangetic West Bengal, Jharkhand, Madhya Pradesh, Chhattisgarh, South Gujarat, Saurashtra, Maharashtra, Karnataka, Andhra Pradesh, Telangana and Tamil Nadu, some parts of Mizoram, rainfall of about 2-5 mm/day is likely over many parts of Uttarakhand, West Uttar Pradesh, East Rajasthan and Odisha, some parts of Kutch, North and Middle Gujarat. Mainly dry weather would prevail over rest of the country.

## Strategic Agricultural Planning based on rainfall during next 2 weeks till 11<sup>th</sup> September

### Current status

**Southern India:** Seasonal rainfall over Kerala is normal (2% deficit). *Viruppu* paddy is in flowering to milky stage at many of the places of Kerala. The rainfall status is normal in coastal (5% deficit) and North Interior Karnataka (5% deficit), while it is in excess (20%) over South Interior Karnataka. In Karnataka, area covered by crops is about 57.5% of normal. Rainfall is deficit in Coastal Andhra Pradesh (-32%) and normal in Rayalaseema (13% deficit). Total area sown in Andhra Pradesh is 25.72 lakh ha, which accounts for 62% of the normal *kharif* season area. Telangana state faces deficit rainfall (-50%). Total area sown in Telangana is 32.43 lakh ha, which accounts for 80% of the normal *kharif* area.

**Western India:** Deficit rainfall condition over Marathwada has reduced by 7% in last three days (50% deficit). Madhya Maharashtra and Konkan regions received normal rainfall with 9% and 14% deficits, respectively. In Maharashtra, *kharif* sowing were completed in 117 lakh ha area (87% of normal area). In Gujarat, rainfall is deficit (-23%) over Saurashtra and Kutch region and the deficit is 32% over the rest parts of the state. About 89 % of normal *kharif* sowing area is covered under various crops so far in Gujarat.

**Central India:** Deficit rainfall condition is prevailing over Vidarbha (29%). Rainfall status is normal in West Madhya Pradesh (-19%), but it is deficit by 27% over East Madhya Pradesh.

**Northwest India:** East Rajasthan received normal (-6%) rainfall while rainfall is 21% deficit in West Rajasthan. Scanty rainfall conditions continues over Punjab (64% deficit) and Haryana, Chandigarh and Delhi (66% deficit). Deficit rainfall conditions exist over Jammu & Kashmir (38%), Himachal Pradesh (35%), East UP (39%) and West UP (58%). In Jammu region, almost 98% of normal area is covered under various crops.

**East & Northeast India:** Odisha has experienced normal rainfall (7%) during the season. Normal rainfall conditions prevail over Jharkhand (9% deficit), Sub-Himalayan West Bengal (-5%) and Gangetic West Bengal (-10%). Rainfall status is normal in Bihar and Assam (-12% and -15% respectively). Nagaland, Manipur, Mizoram and Tripura are facing deficit rainfall conditions (-39%).

### Future Strategies

#### Southern India

##### Andhra Pradesh

- In Coastal AP, sowing of direct seeded rice and chillies is recommended. Farmers are advised to go for short and medium duration varieties of rice instead of long duration varieties. Maintain 2-3 cm water level in rice fields.
- In Rayalaseema, sowing of contingency crops like sorghum, pearl millet, foxtail millet, cowpea, sunflower, green gram, field bean and horse gram may be completed.
- In Cuddapah district, sowing of contingency crops like red gram (60 x 20 cm spacing), maize, tomato, cowpea, field bean (TFB 5) and sunflower in red soils and crops like red gram, jowar and sunflower in black soils instead of groundnut may be completed utilizing the realised and

expected rainfall.

- In Rayalaseema, intercultural operations and weeding may be carried out on a non rainy day to conserve soil moisture.

## **Telangana**

As there is improvement in rainfall activity which is likely to continue, sowing of cotton, maize, groundnut, pulses and castor is expected to be completed in Southern Telangana utilising realised and expected rainfall. However, in view of scanty/deficit rainfall situation (scanty over Nizamabad, Medak districts and deficit over Rangareddy, Nalgonda, Hyderabad, Adilabad, Karimnagar, Warangal, Khammam, Mehbubnagar districts) during earlier weeks, it is suggested for foliar spray of 2% KNO<sub>3</sub> or 2% urea solution to supplement nutrition during dry spells.

Due to severe moisture stress, maize crop has been damaged in Medak, Karimnagar and Mehbubnagar districts of Telangana. Stunted growth is also noticed in Bt Cotton which is at square formation stage. As rainfall is expected in the next fortnight, top dressing of nitrogen may be carried out in cotton crop to revive the crop from moisture stress in Telangana state.

## **Karnataka**

Inadequate soil moisture conditions have led to delayed sowings in major parts of North Interior Karnataka. As there is improvement in rainfall activity and likely to continue over Interior Karnataka.

- Sowing of horse gram, sunflower and fodder crops in North Interior Karnataka, sowing of ragi, desi cotton, cowpea, soybean and horse gram in South Interior Karnataka is expected to be completed.
- Priority should be given to seed cum fodder crops like cow pea, horse gram and moth bean in dry zones so as to avoid scarcity of fodder for live stock.
- Desi cotton (*Herbaciium*) as sole or intercropping with onion + chilli, sunflower (Seed hardening – soaking in calcium chloride solution for 6 hrs before sowing, wider row spacing 120-135 cm), tobacco, maize, may be continued.
- Soil moisture conservation techniques such as compartment bunding, ridges and furrows across the slope are suggested for medium and deep black soils spared for *rabi* sowings.
- Continue planting of coconut, sapota, guava and mango.
- Plan for early *rabi* crops like sunflower, horsegram (PHG-9), sesame and cowpeas.

## **Tamil Nadu**

- Land preparation and sowing of *samba* rice may be continued in the Cauvery Delta Zone of Tamil Nadu.
- Continue sowing of maize and winter irrigated cotton.
- Undertake cultivation of sorghum under rainfed condition.

## **Western India**

### **Gujarat**

#### **North Gujarat Region:**

- Sowing of sesame (cv. Guj. Tal 1,2, 10), cluster bean (Guj. 1 or 2.) and castor (cv.GCH-2, 4, 5 or 7) may be completed.

- As mainly dry weather is likely to continue over North Gujarat and Saurashtra & Kutch region, application of irrigation at critical stages of crops (cotton -flowering, groundnut – flowering/pegging) through micro irrigation systems in North Gujarat and Saurashtra & Kutch region is advised.
- In North Gujarat, use of recommended potash fertilizers to minimize water requirement of crops is recommended.

#### **Saurashtra Region:**

- Sowing of cluster bean (Guj. 1 or 2.), castor (cv. GCH-2, 4, 5 or 7.), sesame cv. Purva-1 and Guar (cv. Guj. Guar 1 or 2) especially in Kutch region is expected to be completed.
- In North Saurashtra, optimum use of recommended potash fertilizers to minimize the water requirement of crops is recommended.
- As mainly dry weather is prevailing, apply irrigation in cotton (flowering stage) (micro-irrigation) in South Saurashtra Zone.
- Repeated intercultural operations may be carried out in black soils to close cracks in soil and create soil mulch to conserve soil moisture.
- Foliar spray of urea (2%) or KNO<sub>3</sub> (2%) in cotton.
- Delay top dressing of N in castor and cotton, till receipt of sufficient rain.
- Alternate furrow irrigation.
- Apply lifesaving irrigation in castor and pigeon pea (micro-irrigation).
- Apply supplementary dose of Nitrogen in form of urea @ 87 kg/h in cotton and pearl millet in Kutch.

#### **South and Middle Gujarat region:**

- Transplanting of GT-4, 5,9 and GT-1 tobacco may be continued under tobacco growing districts of Kheda, Anand, Vadodara and part of Mahisagar district.
- Sowing of castor (GAUCH-2, GCH-5, 6 and GCH-7) is expected to be completed in Navsari, Valsad and Dangs districts.
- Sowing of cluster bean (Guj. 1 or 2) and castor (cv. GCH-2, 4, 5 or 7) may be continued in other districts.
- Sowing of cluster bean (Guj. 1 or 2) and transplanting of fennel may be completed in Bhal and Coastal Zone.

#### **Marathwada**

- As rain occurred during last fortnight and also there is probability of occurrence of rainfall in next fortnight, in unsown areas, sowing of contingency crops like sesame, sunflower and pigeon pea may be continued. Undertake *in situ* rain harvesting methods by making furrows in cotton, soybean and jowar fields.
- Farmers may take up intercultural operations like weeding / hoeing in late sown cotton, soybean, pearl millet, sunflower and pigeonpea crops to conserve soil moisture



## Madhya Maharashtra

- Planting of *adsali* sugarcane may be continued and conserve rain water for future use.
- Sowing of fodder crops like jowar (Ruchira, Phule Amruta, Phule Godhan) and maize (African tall, Karveer, Rajshree) may be continued utilizing realised and expected rain.
- Plan for early *rabi* sorghum, safflower crops.

## Central India

### Madhya Pradesh and Chhattisgarh

- In view of subdued rainfall activity, intercultural operations for control of weeds in crops like rice, soybean, black gram, moong and vegetables is suggested. Application of irrigation to the standing crops is also recommended.

## Vidarbha

Rainfall condition is deficit in Vidarbha (29%) so far following advisories are suggested:

- As there is improvement in rainfall which is likely to continue, maintain water level upto 3-5 cm in already transplanted rice field. Undertake intercultural operations in cotton, soybean, maize and sorghum.
- Sowing of sole pigeon pea (AKT 8811, Vipula, PKV- Tara and BSMR-736 (with closer 45x20 spacing) in the districts of Amravati, Wradha, Washim is suggested.
- Alternative crops include sunflower (TAS 82, PKV SF-9, PKVSH-27, KBSH 1 and KBSH 44), pearl millet (PKV Raj, Shradha and Saburi), sesame (AKT-64 and JLT-7), castor (AKC-1, GCH-4,5,6, DCH-117,32), and pearl millet + pigeonpea (2:1 or 4:2), sunflower + pigeonpea (2:1), sesame + pigeonpea (4:1) intercropping systems.
- Early *rabi* pigeon pea (C-11, ICPL-87119 with closer spacing 45x20 cm) and early *rabi* sesame (N-8) can be sown up to 15 September.

## Eastern India

### Jharkhand

- In fallow sloppy upland niger, lobia, rice bean, urdbean, moongbean, guar, sesame, linseed, safflower and castor etc. can be taken during first fortnight of September.
- Sowing of horse gram, black gram, niger, kulthi, and sweet potato and transplanting of tomato, cauliflower and cabbage may be continued. Planting of mango, guava and litchi may be continued.
- Prepare land for planting of marigold. After land preparation open the furrow by maintaining a row to row distance of 40 cm and apply half dose of urea @ 50 kg, full dose of single super phosphate @ 94 kg & murate of potash @ 45 kg per acre and planting may be done with a plant to plant distance of 30 cm.
- Conserve rain water by repairing the broken bunds of the rice field to saturate the soil.

## West Bengal

- In view of occurrence of good rainfall during the season and possibility of occurrence of rainfall during next fortnight, it is suggested to postpone irrigation to the standing crops.
- Avoid water stagnation to prevent rhizome rot in turmeric & ginger.
- Sowing of black gram may be undertaken.
- As there is probability of rainfall, retting of jute may be undertaken by utilising the expected rainfall.

## Bihar

- In transplanted rice crop, undertake top dressing of 1/3<sup>rd</sup> urea (44 kg/ha) after 1<sup>st</sup> hand weeding at 25-30 days after transplanting and apply remaining 1/3<sup>rd</sup> urea (44 kg/ha) after 2<sup>nd</sup> hand weeding at 40-45 days after transplanting.
- Sowing of pigeon pea (Pusa-9 and Sarad) can be taken up to 15<sup>th</sup> September. Intercropping of black gram/sesame with pigeon pea in 1:1 row ratio is more profitable than sole pigeon pea.
- Before initiation of tassel of *kharif* maize, remove weeds from the field and apply nitrogenous fertilizer.
- Gap filling and eradication of weeds in pigeon pea, black gram and sesame may be undertaken.
- In *kharif* vegetables drain out excess water from the field.

## Odisha

In the flood affected areas, where there was complete failure of crops in upland and up-medium land, sowing of pre-*rabi* pulses and oil seeds like green gram, black gram, horse gram, sesame, castor and vegetables may be continued.

## Northwest India

### Rajasthan

#### East Rajasthan

- Nursery sowing of cauliflower (Pusa Hybrid-2, Improved Japanese, Pusa Shubhra and Pusa Himjyoti) may be continued.
- Hoeing & weeding and removal of alternate rows to conserve moisture is suggested.

#### West Rajasthan

- Application of irrigation to the standing crops is recommended.
- Timely weed control by hoeing is recommended
- Spray thiourea at 500 ppm or undertake vegetative and dust mulching to conserve soil moisture
- Conserve soil moisture by Bhakhar and planking to utilize residual soil moisture for *rabi* crops like taramira (RTM 314) and fodder sorghum (Raj Chari 2) and
- Perennial grasses like sewan, dhaman and modadhaman grass etc. which grow naturally during rainy season can also be grown to use as fodder.



## **Uttar Pradesh**

### **East Uttar Pradesh**

- Nursery sowing/transplanting of cauliflower, cabbage, tomato and chilli in Raibareilly, Sultanpur, Basti, SantKabir Nagar and Gorakhpur districts is suggested.
- Sowing of arhar (Bahar, NarendraArhar 1,2, Azad, Pusa-9, Malveey-Vikas, Chamtkar, PDA-11) and moong (Pant-1, Narendra-1, PDM-54, Malyeey- Jyoti, Janchetana, Janpriya, Jagruti, Samrat and Asha) in Barabanki, Faizabad and Ambedkarnagar districts of Eastern Plain Zone of Uttar Pradesh is recommended. Intercropping of Moong or lobia with Arhar is also advised.
- Sowing of ladies finger and lobia in Gorakhpur, Raibareilly and Sultanpur districts is suggested.
- Apply 2% urea in standing crops except pulses in Kannauj, Mathura, Agra, Kanpur districts of Central Plain Zone of Uttar Pradesh.

### **West Uttar Pradesh**

- As mainly dry weather would prevail with rain at isolated places, undertake weeding in urd, moong, lobia, til, arhar, groundnut, soybean and rice in Bundelkhand zone of Uttar Pradesh.
- Apply life saving irrigation in standing crops, vegetables and fruit crops. Postpone further sowing of fruit crops till receipt of rain.
- Undertake foliar spray of 1% KCl.
- Opening conservation furrow is recommended.

## **Haryana**

As the rainfall situation is scanty so far, crop diversification is advocated and short duration mung bean (MH 421, SML 668) or maize or fodder crops as per local demand/ market are suggested in place of paddy.

Apply irrigation to bajra and transplanted fruit crops. Undertake hoeing in guar and pulses for conserving soil moisture. Alternate wetting and drying in rice fields and irrigation is advised in alternate rows in sugarcane in case of shortage of water for irrigation.

Following measures are also suggested

- Straw mulching in between rows for soil moisture conservation and preparation of ridge and furrow for rain water harvesting.
- Foliar spray of urea (2.5%) at 30-35 days.
- Conjunctive use of canal and ground water.
- Life saving irrigation, if possible.

## **Punjab**

As mainly dry weather is likely to prevail over the state, following recommendations are given.

- Sowing of leguminous and non-leguminous crops in mixture to improve the nutritive value of the fodder i.e. maize + cowpea, sorghum + guara is advised.
- Sowing of short duration early maturing and drought tolerant varieties of crops including maize (PMH1, PMH2) and moong (PAU 911, ML 818).

- Moong variety ML 13 can be sown in rainfed areas in Gurdaspur, Hoshiarpur and Ropar. Moong variety PAU- 911 has been recommended for the whole state except Bathinda, Mansa, Faridkot, Muktsar and Ferozepur districts.
- In Western Plain Zone of Punjab, undertake field preparation for sowing of short duration hybrid maize (PMH 2).
- In Undulating Plain Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot and turnip.
- Adopt moisture conservation practices like hoeing, weeding, mulching in crops like sugarcane, maize, cotton to reduce the evapotranspiration losses and to conserve moisture for *rabi* crops.
- De-tasselling in maize is advised to reduce transpiration losses.
- Life-saving irrigation may be given, if available.

## **Delhi**

As subdued rainfall activity is prevailing and is likely to continue, application of irrigation to the standing crops is recommended.

- Making of higher bunds for conserving rain water in the field is advised.

## **Jammu and Kashmir, Himachal Pradesh and Uttarakhand**

- In Jammu & Kashmir, continue transplanting of cole crops and apply second top dressing of nitrogen @ 3.25 kg urea per kanal in rice after 38-42 days of transplanting and complete second top dressing of nitrogen @ 3.25 kg urea per kanal in maize. Nursery sowing of cabbage (Golden Acre, Pride of India and Pusa Mukta) and cauliflower (Giant Snow Ball and Pusa Synthetic) is suggested.
- Nursery sowing of chinese cabbage and direct sowing of raddish, carrot, broccoli, lettuce in mid hill region and transplanting of ageti cauliflower and cabbage is advised in Chamba, Hamirpur, Kangra, Una and Bilaspur districts of Himachal Pradesh. Application of second dose of urea @ 40-50 kg per hectare to tomato, brinjal, capsicum, chilli and cucurbits and weeding in fodder crops like peas, maize in high hills region is also suggested. In Shimla, Sirmaur and Solan districts, sowing of carrot (var. Arkel, VL-7), cauliflower (Patna snowball and Joint snowball), cabbage (Pride of India, Golden anchor) and transplanting of onion is suggested.
- Mulching with straw or lantana, eupatorium leaves and twigs in between rows and removal of lower 5-6 leaves in maize after complete tasselling to reduce transpiration loss is suggested during first week of September in Sub-Montane and Low Hills Sub-Humid Zone of Himachal Pradesh.
- As rainfall deficit is increased by 6% during last 10 days in Uttarakhand, maintain moisture in rice crop as it is at active tillering stage and apply second dose of Urea.

## **Northeast India**

### **Arunachal Pradesh, Assam & Meghalaya, NNMT**

In flood affected areas of Lower Brahmaputra Valley Zone of Assam, the following contingency measures may be adopted for *sali* rice:

- Nursery raising of the photo insensitive short duration variety like Luit for replanting (in case of total damage).
- Wet seeding of sprouted seeds (@75-80 kg/ha) of short to medium duration varieties like Disang, Luit, (100 days) Kapili, Kalong (120 days) is suggested.
- Adoption of submergence tolerant varieties like Jalashree and Jalkuwari for repeat in flood prone areas.
- In partially affected fields, drain out excess water and apply 1/2 N + 50% K<sub>2</sub>O as top dressing during tillering stage.
- Farmers may also opt for sowing of green gram, black gram, soybean etc.

In Upper Bramhaputra Valley Zone and in North Bank Plain Zone of Assam, farmers in the flood affected areas should select short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown within 1<sup>st</sup> week of September. Long duration cultivars like Monohar Sali, AndrewSali and Gitesh can be transplanted with 60 day old seedlings, whereas Prafulla can be transplanted with 90 days old seedlings. Therefore, farmers should be ready with this type of cultivars to cope up with flood situation. Gap filling in the main field should be done with same age of seedling at 20 and 40 days after transplanting.

- In Central Bramhaputra Valley Zone of Assam, continue transplanting of *sali* rice. Continue sowing of black gram, sesame and nursery sowing of cole crops. In Hill zone of Assam, replanting of dead hills or gap filling with seedlings of *sali* rice of similar age should be done within 7-10 days of transplanting.
- In Meghalaya, maintain water level of 2-5 cm in transplanted *Sali* rice. In high upland fields, planting of tuber crops like sweet potato, colocassia, tapioca, etc. may be continued. Nursery preparation / sowing of vegetables like cabbage, cauliflower, carrot, radish, laipatta, broccoli and French bean may be continued.
- In Mizoram, drain out excess water from cucurbit and pineapple fields.
- In Nagaland, provide good drainage in ginger fields to avoid rhizome rot.
- In Mild Tropical Plain Zone of Tripura, provide adequate drainage in groundnut at pod filling stage particularly in low and medium lands and where there is a chance of water stagnation.