



***National Agromet Advisory Service Bulletin***  
***based on***  
***Extended Range Weather Forecast (ERFS)***

***Valid for 16<sup>th</sup> to 29<sup>th</sup> June, 2017***

***Date of Issue: 16<sup>th</sup> June, 2017***

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**Earth System Science Organisation  
India Meteorological Department**

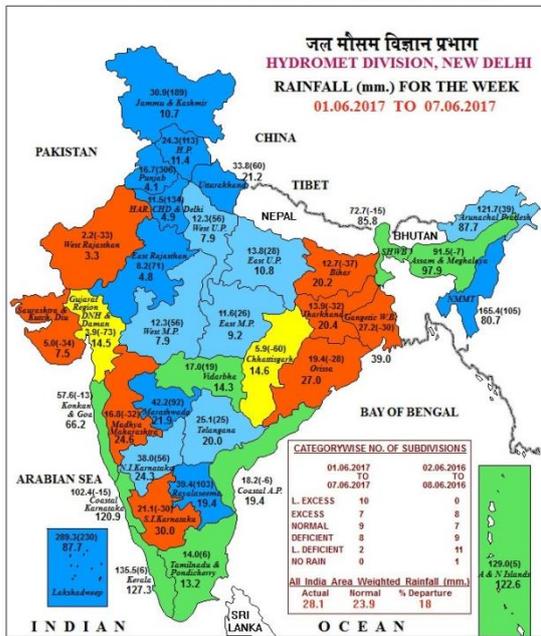
**&**

**Indian Council of Agricultural Research (ICAR)  
All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),  
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad**

# Realized Rainfall

(1<sup>st</sup> to 14<sup>th</sup> June 2017)

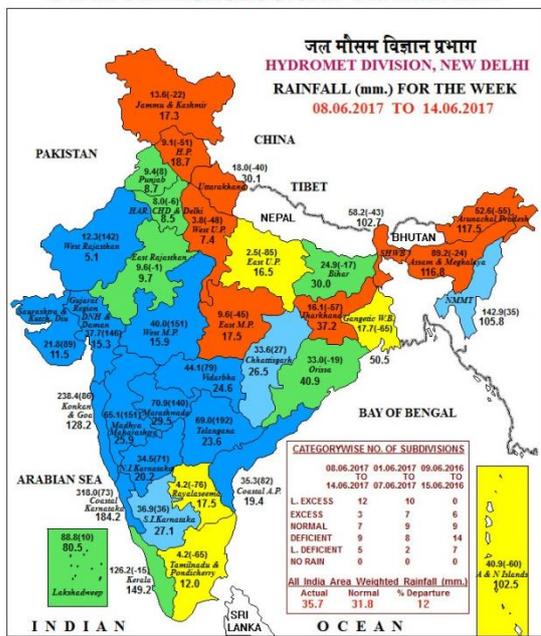
## भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)  
■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:  
 (a) Rainfall figures are based on operational data.  
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.).  
 Percentage Departures of Rainfall are shown in Brackets.

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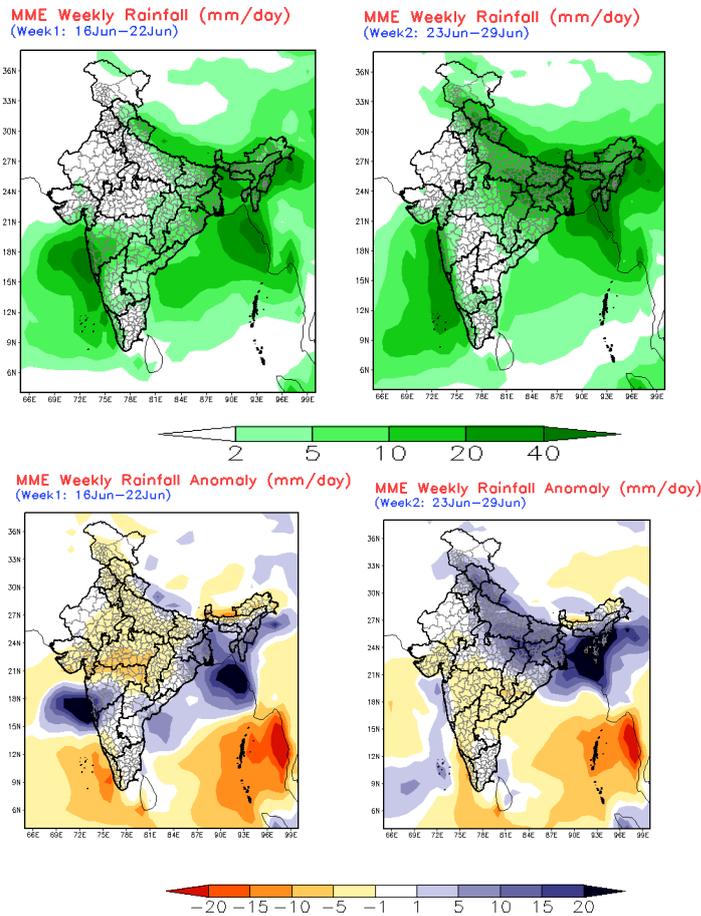
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NOTES:  
 (a) Rainfall figures are based on operational data.  
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.).  
 Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred during last two weeks in Punjab, Haryana & Delhi, East Rajasthan, West Madhya Pradesh, Konkan & Goa, Marathwada, Vidarbha, Nagaland, Manipur, Mizoram, Tripura, Coastal Andhra Pradesh, Telangana, Coastal Karnataka, North Interior Karnataka and Kerala.
- Normal or above normal rainfall occurred in either of the last two weeks in Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Uttar Pradesh, West Rajasthan, Bihar, Sub-Himalayan West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, East Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Gujarat, Rayalaseema, South Interior Karnataka and Tamil Nadu.
- Below normal rainfall occurred in the last two weeks over Jharkhand and Gangetic West Bengal.

## Extended Range Forecast System

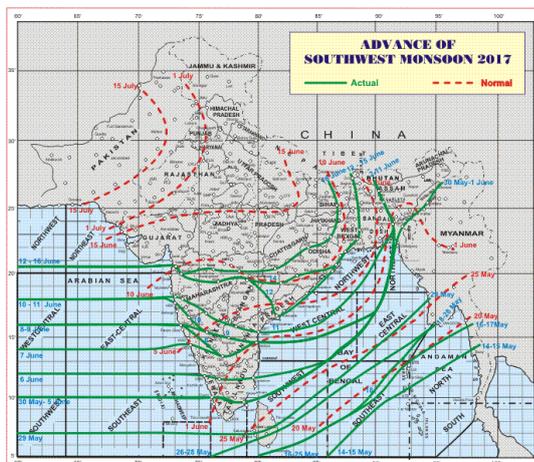
### District wise rainfall forecast and anomaly maps for the next 2 weeks (IC =14 June)



- Extended Range Forecast (ERF) indicates that during week 1 (16-22 June) the rainfall belt is likely to be over the west coast and adjoining regions (most parts of Maharashtra, most of Karnataka, South Gujarat, Telangana, Rayalaseema, Chhattisgarh and part of adjoining east Madhya Pradesh) and also over the eastern states of India (West Bengal, Odisha, coastal Andhra Pradesh, Bihar, Jharkhand, Eastern Uttar Pradesh) with above normal rainfall likely over Konkan & Goa and adjoining regions, coastal parts of Odisha, Gangetic West Bengal and Coastal Andhra Pradesh, adjoining Jharkhand and Bihar and southern parts of Northeastern states.
- During week 2 (23-29 June), the monsoon circulation over central India is expected to be weak. The above normal rainfall belt is most likely over the Northeastern states, Gangetic West Bengal, Jharkhand, Bihar, Uttar Pradesh, Himachal Pradesh, Haryana, Punjab and adjoining north Madhya Pradesh, north Chhattisgarh, north Odisha and parts of Konkan & Goa. The rainfall over remaining regions is expected to be below normal.

## Advance of Southwest Monsoon - 2017

16<sup>th</sup> June, 2017



- The southwest monsoon has further advanced into some more parts of Madhya Maharashtra, remaining parts of Marathwada, some parts of Vidarbha, some more parts of Chhattisgarh, most parts of Odisha, remaining parts of West Bengal and some parts of Jharkhand and Bihar.
- The Northern Limit of Monsoon (NLM) passes through Lat. 20.5°N / Long. 60.0°E, Lat. 20.5°N / Long.70.0°E, Valsad, Nasik, Buldana, Yeotmal, Kanker, Jharsuguda, Jamshedpur, Bhagalpur and Lat. 27.0°N / Long. 86.0°E.
- Favorable Conditions are developing for further advance of southwest monsoon into some more parts of Madhya Maharashtra, Vidarbha, Chhattisgarh, remaining parts of Odisha, Jharkhand and Bihar during next 3-4days.

### Strategic Agricultural Planning based on rainfall during next two weeks till 29<sup>th</sup> June

#### Salient Agromet Advisories

- There was good monsoon rainfall occurred over all Northeastern States and Southern States, West Bengal including many parts of Maharashtra, Chhattisgarh, Odisha, some parts of south Gujarat, Jharkhand and Bihar and likely to continue during succeeding week except in many parts of Tamil Nadu. This facilitates sowing of *kharif* crops in the above region.
- Punjab, Haryana, East Rajasthan and West Madhya Pradesh have received good pre-monsoon showers during last fortnight and conditions are also favourable for the arrival of monsoon during the succeeding fortnight over some more parts of Madhya Maharashtra, Vidarbha, Chhattisgarh and remaining parts of Odisha, Jharkhand and Bihar during next 3-4 days. This facilitates land preparation and sowing of *kharif* crops in these regions.

#### Kerala

##### Rainfall situation

- During 08.06.2017 to 14.06.2017, Kerala's Northern zone received 239.5mm against the normal rainfall of 189.8mm (26.2% surplus), Southern zone received 42.23mm against the normal rainfall of 118.2mm (64.3% deficit), Central zone received 117.3mm against the normal rainfall of 143.1mm (23% deficit), High range zone received 96.5mm against the normal rainfall of 139.7mm (31% deficit) and Problem area zone of Kerala received 89mm

against the normal rainfall of 162.7mm (45.3% deficit).

### Agromet Advisories

- **Rice:** Transplanting of rice and wet sowing of rice with proper drainage facilities.
- **Planting:** Planting of coconut, pepper and arecanut in the High Altitude Zone.
- **Arecanut:** Take necessary phyto-sanitary measures and provide proper drainage facilities. Apply 500 grams of lime per plant. Spray 1% Bordeaux mixture as a prophylactic measure to control mahali and bud rot diseases.
- **Banana:** As there is chance of rhizome weevil infestation farmers are advised to adopt strict phyto-sanitary measures. Sigatoka leaf spot disease may become severe due to increase in relative humidity, if found severe spray 1% Bordeaux mixture or Tilt 25 EC (1 ml/lit of water) after cutting the severely affected leaves and burning it
- **Pepper:** Drench the soil and with 0.2 % Copper oxy chloride and spray the aerial part with 1% Bordeaux mixture as a prophylactic measure to control Quick wilt and pollu disease. Application Trichoderma / Psuedomonas culture will control the quick wilt infestation.
- **Vegetables:** Planting of chilli, brinjal to be completed before severe rain. Apply lime while. Preparing land. Provide organic manure 100 kg/cent as basal.
- **Ginger:** Remove weeds and apply urea @ 33 Kg per acre. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% mancozeb. Apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil. Mulching with Lantana camera plants will reduce the attack of stem borer.
- **Cardamom:** Ideal time for main field planting. Take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) and spray 1% Bordeaux mixture (500-1000 ml/plant) before the onset of monsoon. As a prophylactic measure to control rhizome rot drench the soil with 2-3 liters of copper oxy chloride (0.25%) solution. Application of trichoderma can control the azhukal and rhizome rot to some extent. Apply mulch and clean the drainage channels.
- **Coffee:** Leaf rust disease may become severe due to increase in relative humidity. Apply 0.5% Bordeaux mixture or plant wax 20 EC @ 1-2 ml per litre to control the disease. Spray 40-54 ml Ethrel in 200 litres of water to reduce fruit fall in coffee.

### Tamil Nadu

- Completion of nursery sowing; transplanting of *Kuruvai* rice in Western and Cauvery Delta Zones.
- Sowing of small millets in the foothills of Western Ghats areas.
- Arrangement for proper drainage facility.

### Karnataka

#### Rainfall status

- State actual rainfall for 24<sup>th</sup> week i.e., 09<sup>th</sup> June to 15<sup>th</sup> June 2017 was 60.0 mm as against the normal of 41.0 mm with (+) 48 % deviation. Whereas SIK received 10.0 mm of rainfall as against the normal of 16.0 mm leading to (-) 36 % deviation.

#### Agromet Advisories

- Ploughing across the slope will make insitu soil moisture conservation and Take up land leveling so that more rain water is conserved in the soil.
- Take up land preparation and strengthen the bund with fodder grass which will facilitate conservation of rainwater due to monsoon showers. Ploughing across the slope will make insitu soil moisture conservation.

- Take up land leveling so that more rain water is conserved in the soil.
- Agro forestry on the bund involving Melia dubia (Hebbevu), Silver oak and Causurina is recommended for sustainable income under abnormal extreme rainfall events.
- Procure good quality of seeds and fertilizers. Take up the germination test for Kharif sowing.

The following crops are suggested for kharif sowing.

Under monocropping the long duration crops

- Redgram : TTB-7, BRG-1,2,4&5
- Castor: DCS-9 (Jyothi), DCH-177&32

Under double cropping the short duration crops:

- Ragi : Indaf -9, ML-365
- Sesamum : Navile-1, T-7
- Groundnut : TMV-2, JL-24, KCG-6
- Cowpea: TVX-944, KBC-1
- Green gram: PS-16, PDM-84,178
- Black gram: Karagao-3, T-9, Rashmi(LBG-625)

### **Coastal Karnataka**

- Transplanting of rice in Coastal Zone and continue drill sowing of rice in Hill Zone with proper drainage facilities.

### **South Interior Karnataka**

- Continue sowing of maize, red gram, groundnut, cowpea, green gram, black gram, horse gram, field bean with sufficient rainfall.

### **North Interior Karnataka**

- Continue nursery sowing of rice and sowing of green gram, black gram, sunflower, maize, Bt. cotton, red gram, bajra, sesame, soybean, jowar and groundnut (bunch type) with sufficient rainfall.
- In light and medium black soils adopt intercropping of cotton + onion (1:5), cotton + chilli (1:1), cotton+ groundnut (1:3), cotton + green gram (1:1), cotton + soybean (1:1), kharif jowar+ red gram (2:1), groundnut + castor (3:1), bajra + red gram (2:1), sesamum + red gram (2:1), groundnut + red gram (3:1), green gram / black gram + red gram (2:1), groundnut + castor (3:1), bajra + groundnut (2:4), chilli + onion (2:4), red gram + soybean (2:4), hybrid cotton + soybean (1:2), maize + soybean (1:2) row proportion.

### **Andhra Pradesh**

#### **Rainfall situation**

- During the period 09.06.17 to 15.06.17, Coastal AP received 41.3 mm rainfall (27 % of the normal), Rayalaseema received 25.2 mm rainfall (-22% of the normal) and Andhra Pradesh state received 50.8 mm (7%) rainfall against normal rainfall of 47.4 mm.
- During the period 01.06.17 to 15.06.17, Coastal AP received 59.6 mm rainfall (17 % of the normal), Rayalaseema received 43.5 mm rainfall (-14% of the normal) and Andhra Pradesh state received 54.1 mm (7%) rainfall against normal rainfall of 50.7 mm.

## **Agromet Advisories**

### **Rayalaseema**

- Rayalaseema farmers are advised to complete land preparation and take up sowing kharif sowings where ever land preparation completed
- As rainfall received at isolated places during the previous week, deficit/scanty in Ananthapuramu and Kadapa districts and less than expected normal in Chittoor and Kurnool districts, farmers can for sowing of rainfed crops like bajra, sorghum, red gram, green gram, black gram, castor in Chittoor, Nellore, Kadapa, Kurnool and Ananthapuramu districts where ever there is sufficient soil moisture and take up sowing after receipt of rainfall in remaining places.

### **Coastal Andhra Pradesh**

- Utilizing the available soil moisture, take up sowing of green manure crops like Sunnhemp or Daincha in paddy fields in north coastal, Godavari, Krishna, Guntur districts.
- Sowing of Rice nurseries in Srikakulam, Vizianagaram, East and West Godavari, Krishna and Guntur districts under assured irrigation conditions.
- Farmers can take up sowing of Mesta, Sesame, Ragi, planting of sugarcane in North Coastal AP (Srikakulam, Vizianagaram and Vishakhapatnam), Krishna and Godavari districts with the available soil moisture.
- With the good rainfall received during the week and further forecast of advance of monsoon to Coastal AP, Farmers are advised to go for sowing of rainfed crops like Maize, Bajra, redgram, greengram, blackgram, cotton, groundnut in Krishna and Godavari zone and maize, bajra, ragi redgram, greengram, blackgram, groundnut in North coastal AP with the available soil moisture and forecasted good rainfall.
- Groundnut sowings can be taken up in Chittoor, Nellore and Kadapa and under assured irrigation in Kurnool and Ananthapuramu districts and from 1st July onwards under rainfed conditions in Kurnool and Ananthapuramu districts.

### **Telangana**

- Nursery preparation of rice (medium duration varieties).
- Sowing of maize, green gram and soybean in North Telangana Zone.
- Sowings of jowar, bajra, maize, soybean, green gram, cotton, red gram etc. in South Telangana Zone.
- Intercropping of red gram in cotton or maize fields.

### **Maharashtra**

#### **Konkan**

- Completion of Nursery sowing of *kharif* rice and ragi in Konkan. Transplanting and direct sowing of rice in Konkan region.

#### **Madhya Maharashtra**

- Nursery sowing of rice in Madhya Maharashtra and direct sowing of *kharif* rice in Kolhapur.
- Sowing pearl millet, groundnut, pigeon pea, sunflower, jowar and soybean etc.

### **Marathwada**

- Sowing pigeon pea, green gram black gram, groundnut and maize, nursery preparation for *kharif* onion.

### **Vidarbha**

- Complete preparatory tillage for sowing of kharif crops (sorghum, cotton, green gram, black gram, soybean) and keep the inputs ready accordingly. Continue land preparation for nursery sowing of kharif rice in Eastern Vidarbha Zone.
- Sowing of crops be undertaken after sufficient pre-soaking rains, when 2 to 3 days of about 60-75mm rainfall has occurred.
- For cotton, recommended deshi varieties include AKA-7 with seed rate 12 to 15kg/ha and spacing of 60 x 15 cm. American improved varieties include AKH-081, AKH 9916 with seed rate of 12 to 15 kg/ha and spacing 60x15cm OR 60x30 cm depending on the soil type. Cotton deshi hybrid PKVDH-1 is recommended with seed rate @ 3.0 to 3.5 kg/ha and spaced at 60x45 cm. Recommended Bt cotton varieties may also be preferred.
- Recommended soybean varieties are JS-335, JS 93-05, JS 9560, JS 97-52, MAUS-71, MAUS-81.
- Pigeon pea varieties to be chosen as per the soil type are - early duration varieties for medium soil type(TAT-10, ICPL 87, AKT-8811) , medium duration varieties for medium to heavy soil type(BSMR-736, PKV Tara, BSMR-853) and long duration varieties for heavy soil type (ICPL-87119, C-11).
- Recommended sorghum varieties are early duration- CSH-14 and CSH-17, medium duration- CSH-9 CSH-16, SPH-1635 and improved- SPV-669,CSV-20.
- Recommended greengram varieties are PKV- green gold, PKV mug -8802, TARM-18 and for black gram PKV-15, TAU-1, TAU-2 and TPU-4.
- Feasible risk minimizing intercropping systems include cotton + greengram/blackgram (1:1), pigeon pea + greengram / blackgram/soybean (2:4), sorghum + greengram/pigeonpea (3:3) and cotton + sorghum+ pigeon pea + sorghum (3:1:1:1), cotton+soybean+pigeonpea+soybean (3:2:2:2). Also in soybean after every 6 or 9 rows one row of pigeonpea may be sown.
- Crop specific seed treatment/inoculation is advisable at the time of sowing for that use Azotobacter @ 25 gm/kg, Rhizobium @ 25 gm/kg, PSB @ 25 gm/kg and bio-fungicide Trichoderma @ 4 gm /kg of seed.
- As far as possible follow BBF layout for sowing kharif crops, particularly soybean, green gram and black gram.

### **Gujarat**

- Continue nursery preparation for rice; start land preparation for transplanting of rice. Start sowing of pigeon pea, green gram, black gram, groundnut, sorghum, cotton, cowpea etc. in South Gujarat with sufficient rainfall.
- Continue land preparation for sowing of pearl millet, red gram, black gram, sesame, maize, cotton, groundnut etc. in North Gujarat.

## **North Eastern States**

### **Assam**

- Continue nursery sowing of flood tolerant *sali* rice variety viz. Swarna Sub-1, Ranjit Sub-1 and Bahadur Sub-1 in the Barak Valley Zone.
- Rice cultivars Jalashree and Jalkuwari are recommended for sowing in flood prone areas in high rainfall zones.
- Continue transplanting of *baou* rice. Continue sowing of maize.

### **Meghalaya**

- Sowing of maize in high and mid altitudes and nursery sowing and land preparation for transplanting of Sali rice.

### **Arunachal Pradesh**

- Transplanting of finger millet and nursery sowing of rice, sowing of cowpea, French bean and soybean.

### **Nagaland**

- Prepare the main field for transplanting of Jhum rice. Prepare the main field for transplanting TRC/WRC paddy.
- Arrangement of drainage facilities in green gram fields to manage soil borne root diseases.

### **Manipur**

- Nursery raising for main kharif rice.
- Land preparation for transplanting of rice.
- Sowing of maize, soybean, groundnut and black gram.
- Community nursery in upland areas so that it may be least affected with the heavy rains.
- Undertake sowing of cowpea. Maintain water level at 5-8 cm in pre-*kharif* rice.

### **Mizoram**

- Transplanting of pre-kharif rice.
- Maintain proper drainage in the Jhum rice, cowpea, okra and maize fields.

### **Tripura**

- Land preparation and sowing of maize in upland and medium upland and sowing of groundnut.

## **West Bengal**

- Nursery sowing of rice crop.
- Planting of large cardamom plants.
- Avoid stagnation of water in the maize, round chilli, ginger and turmeric fields.

## **Bihar**

- Nursery sowing of rice and onion.
- Sowing of maize.

## **Jharkhand**

- Nursery sowing of rice, sowing of direct seeded upland rice and maize.

## **Odisha**

- Land preparation and direct sowing of rice in medium and low lands.
- Nursery sowing of rice.
- Land preparation and sowing of medium duration crops like groundnut, maize, arhar and cotton in upland.

**Madhya Pradesh**

- Nursery sowing of rice; land preparation for sowing of soybean, maize, groundnut, arhar, green gram and black gram. Nursery sowing of onion.

**Chhattisgarh**

- Nursery sowing of rice; land preparation and sowing of soybean, maize, groundnut, arhar, green gram and black gram in south Chhattisgarh. Nursery sowing of onion.

**Punjab**

- Nursery sowing of basmati rice.
- Land preparation / sowing of arhar, maize and soybean.

**Haryana**

- Nursery sowing of basmati rice.
- Land preparation / sowing of guar, bajra, maize, cluster bean.

**Delhi**

- Nursery sowing of basmati rice.
- Land preparation / sowing of guar, bajra, maize, cluster bean.

**Uttar Pradesh**

- Nursery sowing and direct sowing of rice.
- Sowing of maize, arhar, groundnut and nursery sowing of onion.

**Uttarakhand**

- Nursery sowing of basmati & scented rice, sowing of maize and groundnut.

**Himachal Pradesh**

- Nursery sowing of rice, sowing of cucurbits crops and transplanting of tomato/ cabbage/ cauliflower in main field.

❖ National AAS Bulletin based on ERFs is also available at <http://www.imdagrimet.gov.in/erfsview15>