



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

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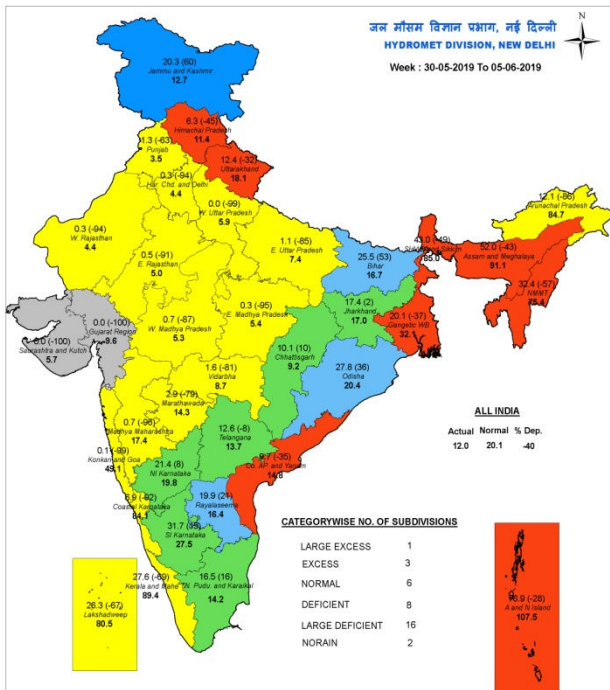
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Indian Council of Agricultural Research (ICAR)
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Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad.
&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall (30th May to 12th June, 2019)



SUBDIVISION RAINFALL MAP

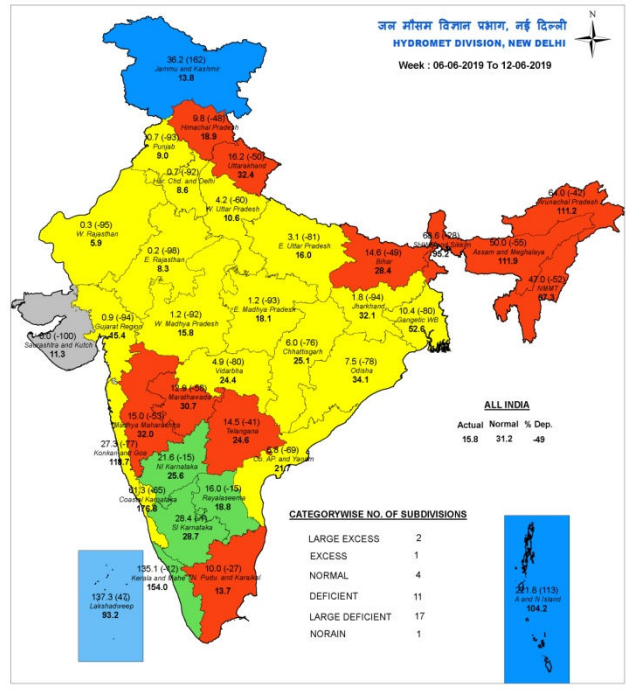


Legend
Large Excess (80% or more) Excess (20% to 80%) Normal (-19% to 19%) Deficient (58% to -20%) Large Deficient (-89% to -40%) No Rain (-100%) NO DATA

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



SUBDIVISION RAINFALL MAP



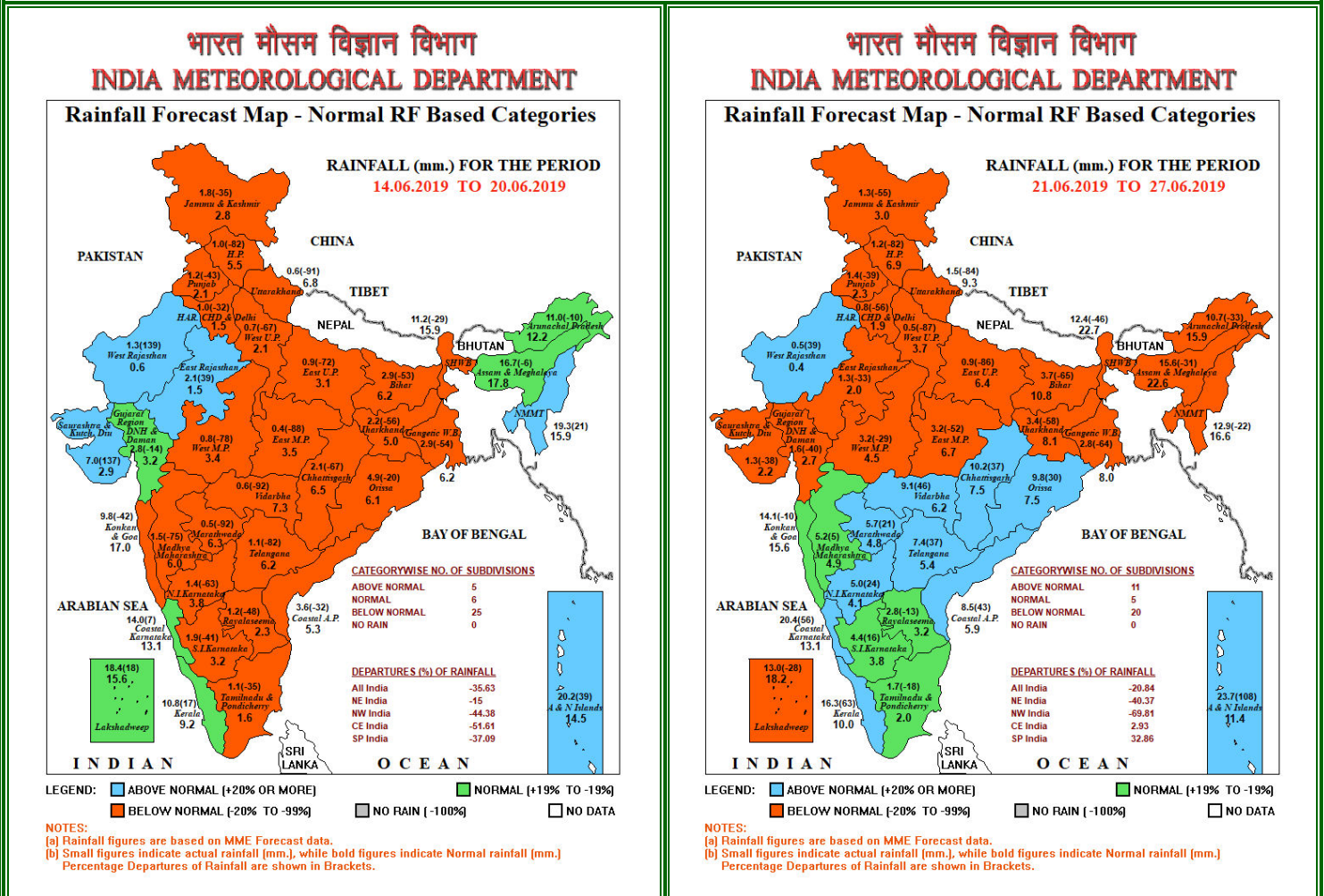
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NOTES :
a) Rainfall figures are based on operation data.
b) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

- Normal or above normal rainfall occurred in both the weeks in Jammu & Kashmir, Rayalaseema, North Interior Karnataka and South Interior Karnataka.
- Normal or above normal rainfall occurred in either of the two weeks in Bihar, Jharkhand, Odisha, Chhattisgarh, Telangana, Kerala, Tamil Nadu, Lakshadweep and Andaman & Nicobar Islands.
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 12 June) (14th to 27th June 2019)



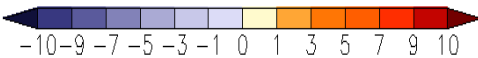
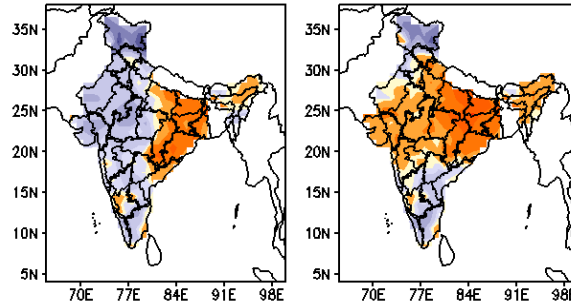
- **Week 1 (14.06.2019 to 20.06.2019):** Although the cyclone associated rainfall over Gujarat and parts of Northwest India will continue during the week, the overall monsoon rainfall will be below normal during the week over most parts of India. Country as a whole and all the three homogeneous regions of India (Central India, Northwest India and Peninsular India) will have below normal rainfall during the week. Over the Northeast India rainfall will also be normal to below normal rainfall during the week.
- **Week 2 (21.06.2019 to 27.06.2019):** Monsoon rainfall will increase over South Peninsular and Central India during the week.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 12 June)
(14th to 27th June 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 14Jun–20Jun)

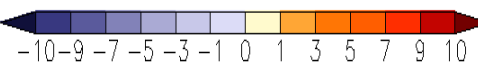
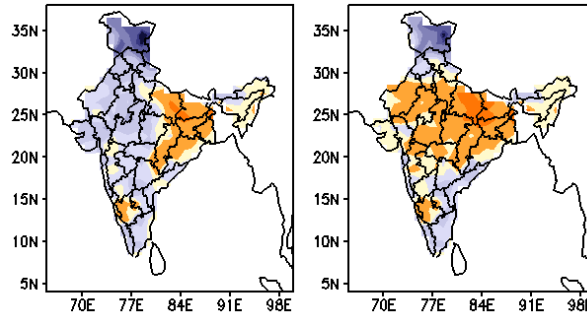
(Week2: 21Jun–27Jun)



MME forecast Tmin anomaly (Deg C)

(Week1: 14Jun–20Jun)

(Week2: 21Jun–27Jun)



Maximum Temperature (Tmax)

- **Week 1 (14.06.2019 to 20.06.2019) and Week 2 (21.06.2019 to 27.06.2019):** (i) Tmax will be mostly above normal over eastern states of India (Odisha, Gangetic West Bengal, Chhattisgarh, Jharkhand and parts of Northeast India) during week 1 and week 2.

(ii) Above normal Tmax is also likely over Madhya Pradesh, Maharashtra, Gujarat, Uttar Pradesh, Uttarakhand, east Rajasthan and Odisha, Chhattisgarh, Jharkhand, Gangetic West Bengal and Northeast India during week 2.

Minimum Temperature (Tmin)

- **Week 1 (14.06.2019 to 20.06.2019) and Week 2 (21.06.2019 to 27.06.2019):** (i) Minimum temperature anomalies also show similar patterns like that of maximum temperature in week 1 and week 2.

(ii) In addition to above normal Tmin over central and eastern parts of India, Tmin will also be above normal over central and Northwest parts of India during week 2.

Strategic Agricultural Planning based on rainfall during next two weeks till 27th June 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 13 June 2019 over Kerala is 155.0 mm (30% deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is normal for week-1 and above normal for week-2.

- Since humid conditions prevailed in the state, there is a chance of bud rot in coconut Plantations. Hence keep perforated Mancozeb sachets (5 g) per palm around spindle leaves as a prophylactic measure against bud rot.
- There is a chance of sigatoka disease in banana. As a precaution, spray 20 g Pseudomonas per litre of water.
- Since there is a chance for prolonged rainfall, there are chances of mahali disease in arecanut. Prophylactic spraying of Bordeaux mixture (1%) or Copperoxy Chloride 50WP (2g/l) with sticker is recommended.

Karnataka

Amount of rainfall received over North Interior Karnataka is 41.6 mm (2% excess), South Interior Karnataka is 54.4 mm (11% excess) and Coastal Karnataka is 67.8 mm (72 % deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) over North Interior Karnataka and South Interior Karnataka is below normal, Coastal Karnataka is normal for week-1 and over North Interior Karnataka and Coastal Karnataka is above normal and over South Interior Karnataka is normal for week-2.

North Interior Karnataka

- Wherever sufficient rainfall is received, farmers are advised to take up sowing of *kharif* crops like Greengram, Black gram, Soybean, Maize, Bt. Cotton, Redgram, Bajra, Sesamum, Navane and Groundnut (bunch type).

South Interior Karnataka

- TTB-7, BRG-1, 2, 4&5 are recommended varieties of redgram.
- TVX-944, KBC-1 are recommended varieties of cowpea.
- TMV-2, JL-24, KCG-6 are recommended varieties of groundnut.

Tamil Nadu

Amount of rainfall received during the period of 01 to 13 June 2019 over Tamil Nadu is 21.1 mm (12 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for week-1 and normal for week-2.

- Prevailing weather condition is favorable for citrus canker / scab disease incidence. To control, spray Copperoxy Chloride 0.2% at fortnight intervals.
- For protecting banana from high wind speed, mount the soil around the base of the tree and give

support by using Casuarina poles.

- In the prevailing weather condition shootfly occurrence is noticed in sorghum. Spray Dimethoate 30 EC @ 500 ml/ha or Neem Seed Kernel extract 5% to control.

Maharashtra

Amount of rainfall received over Madhya Maharashtra is 15.7 mm (67% deficit), over Marathwada is 18.3 mm (58% deficit), Vidarbha is 6.5 mm (80% deficit) and Konkan region 27.4 mm (83% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) over all the sub divisions of Maharashtra is below normal for week-1 and over Vidarbha and Marathwada is above normal and normal over Madhya Maharashtra and Konkan for week-2.

Marathwada

- To increase yield as well as to maintain soil health, intercropping of Pigeon pea + Pearl millet (1:2 or 2:4), Pigeon pea + Sorghum (3:3 or 2:4), Pigeon pea + Cotton (1:6 or 1:8) and Pigeon pea + Soybean/Green gram/Black gram (1:2 or 2:4) should be applied.
- Intercultural operation should be done in grape orchard.

Madhya Maharashtra

- Give alternate furrow irrigation to sugarcane.
- Use certified seeds of recommended varieties of various crops for *kharif* sowing.
- For control of fruit flies in the cucurbit vegetables, install clue-luer traps @ 2 per acre and spray 5% Azadirachtin @ 10 ml + 10 litres of water.
- Land preparation should be carried out after first monsoon shower and sowing should not be undertaken until sufficient moisture availability in the field.

Konkan

- During next five days, there is a forecast of medium to heavy rainfall, hence complete the sowing of rice nursery.
- Carry out sowing operation of cucurbitaceous crops with a spacing of 1.5 x 1 m. Apply 2 kg FYM or compost along with 50 to 60 g mix fertilizer (Suphala) per vine at the time of sowing.
- Provide clean, hygienic and plenty amount of drinking water to farm animals and poultry birds. Keep good aeration in animal shed.

Vidarbha

- Isolated rainfall activity is forecasted from 14 June to subsequent period and maximum temperatures are likely to be in the range of 40 to 42° C over the region during next 48 hours with heat wave conditions. Hence application of irrigation is advisable in orchards.
- After onset of monsoon, do not hurry for sowing till sufficient rainfall of 65 -75 mm occurs in two to three days. Preparatory tillage of fields for *kharif* sowing may immediately be completed. Before last harrowing, FYM/compost be uniformly spread over the field and then harrowed in the surface layer.
- Prepare rice seed beds at 1.2 x 4.0 m size for rice nursery on upland fields.

Odisha

Amount of rainfall received over Odisha during 01 to 13 June 2019 is 33.6 mm (34 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for week-1 and normal for week-2.

- Now the weather is optimum for sowing of arhar. Grow high yielding varieties such as early-duration-Prabhat, Upas-120, ICPL-86012, Medium duration- Asha, Visakha, Use 8-10 kg/acre. Before sowing seeds are to be treated with 2 g Bavistin/kg seed.
- The weather is optimum for sowing of maize for green cob purpose under irrigated condition. High yielding varieties like Navjot, Shakti, Decan-107, Decan-109 is recommended.
- Presently the weather is optimum for okra planting. It can be grown throughout the year. Grow improved high yielding varieties like Utkal Gourav, Arka Anamika, Uphar, Parvani kranti etc.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 13 June 2019 is 17.7 mm (61 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Farmers are advised to adopt ridge and furrow method for cultivation of different crops except rice. This methods has several advantages like better yield, conservation of rain water in furrows, lesser soil erosion and rotting of the plant in the event of excess rain.
- **Upland** - Keeping in mind the variability in rainfall, farmers may prefer cultivation of those crops like Arhar (Pigeonpea), Urd (Blackgram), Marua (Finger millet), Jowar (Bajra) etc. having least water requirement. Farmers are also advised to adopt inter cropping. Such type of cropping system reduces loss in the events of erratic or abnormal rainfall.

Bihar

Amount of rainfall received over Bihar during 01 to 13 June 2019 is 28.0 mm (32 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- In view of dry weather in forecast period, harvesting and threshing of *rabi* maize is advised.
- Picking of matured pods of mung bean and urd bean is also advised.
- Nursery sowing is advised for medium duration of rice varieties such as Seeta, Santosh, Saroj, Rajshri, Prabhat, Rajendra suvasni, Rajendra kasturi and Rajendra bhagwati in North Bihar. Before sowing, seeds should be treated with Carbendazim @1.5 g/kg of seed.
- Sowing of *kharif* maize is advised. Devki, Suwan, Shaktimaan-1, Shaktimaan-2, Rajendra Shanker makka-3 and Ganga 11 varieties are suitable for sowing in North Bihar. Application of 100 quintals of FYM, 30 kg Nitrogen, 60 kg Phosphorus and 50 kg potash per hectare is advised during land preparation.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 4.2 mm (81% deficit) and West Uttar Pradesh is 4.2 mm (73% deficit) during 01 to 13 June 2019. The extended range weather forecast over East and

West Uttar Pradesh for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Frequent irrigations in standing crops should be done at shorter interval.
- Ensure the availability of Hybrid varieties of paddy such as Arize 6444, Arize 6201, PHB 71, Narendra hybrid dhan-2, KRH-2, PRH-10, Pant hybrid dhan-1, Ganga, HRI 157, DRRH-3 and US-312 and also advised for its nursery raising.
- Sowing of pigeonpea with improved varieties such as Paras, UPAS-120 should be started under optimum soil moisture condition.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 to 13 June 2019 is 10.4 mm (68 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for week-1 and above normal for week-2.

- Deep ploughing of the field should be done and covered with polythene. This will prevent crops from soil borne diseases, weeds and insect eggs will be destroyed in the soil.
- Farmers are advised to go for clean and healthy seeds of *kharif* crop which should be kept ready for sowing during current season.
- Before nursery sowing or direct seeding of rice crop, rice seeds should be treated with 17 % salt solution. Certified or foundation seeds should be treated with fungicide provided with packet.

Rajasthan

Amount of rainfall received over East Rajasthan is 0.6 mm (95% deficit) and West Rajasthan is 0.5 mm (94% deficit) during 01 to 13 June 2019 is 10.4 mm (68 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) over East and West Rajasthan is above normal for week-1 and above normal over West Rajasthan and below normal over East Rajasthan for week-2.

- Ploughing and incorporated FYM in the fields.
- Procure improved seeds and fertilizers for ensuing *kharif* season. Improve varieties of bajra are RHB-121, HHB-67, HHB-60, Raj-171, GHB-538, Pusa-605, RHB-177 in western and eastern Rajasthan and improve varieties of maize are HQPM-1, HQPM-5, PEHM-1, PEHM-2, Pratap Hybrid-1, Bio-9681, Bio-9637, Navjot, Mahi Kanchan, Pratap Makka-5 are suitable for maize growing region in the state.

Gujarat

Amount of rainfall received over Gujarat region is 0.9 mm (96% deficit) and no rainfall in Saurashtra and Kutch during 01 to 13 June 2019 is 10.4 mm (68 % deficit). The extended range weather forecast for next two weeks (14-20 and 21-27 June) over Gujarat region is normal and Saurashtra & Kutch is above normal for week-1 and below normal over both the sub- divisions for week-2.

- For paddy nursery, select 1/10th area for planting field. Ploughing, harrowing and 1 m wide raised beds should be considered for planting of paddy. Apply well decomposed FYM/Compost at the time of land preparation.
- In sugarcane, earthing up is advised. Make field drainage channels properly.
- To protect mango fruits from high wind and rainfall damage, harvest mango fruits from trees and store in protected facility.
- Improve drainage system in vegetable crops.
- Avoid spray or application of agrochemicals in field for next three days.

Assam

Rainfall received over Assam is 89.8 mm (49% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is normal for week-1 and below normal for week-2.

- Continue the sowing of well germinated seeds of Sali rice in the nursery bed. The nursery bed should be of 10 m length and 1.25 m wide in leveled well-puddle soil. About 6-7 such beds will be required to transplant one bigha of land. Apply 20 kg FYM, 80 g urea, 80 g SSP and 40 g MOP in each bed and mixed thoroughly.
- During this period farmers may observe circular spot as well as water soaked sunken lesions with black margin in chilli. To control these disease, spray Captan or Captaf 5 g/2.5 litre of water.
- Collect local cultivar of citrus viz. Assam lemon for planting in the orchard or homestead garden. Select high land with uniform soil texture for planting. Prepare pits of 0.5m×0.5m size with a spacing of 3m×3m and refilled with soil-manure mixture (1:1) and then allowed to settle.

West Bengal

Rainfall received over Gangetic West Bengal is 28.1 mm (64% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Cloudy days are expected from tomorrow and light rainfall may occur in next five days. Thus, complete the nursery-bed preparation of aman rice, as per the suggestions provided last week. Sow 7 to 8 Kg seeds in the seedbed for transplanting of one bigha of land. Use suitable and improved varieties like IET-4786, Khitish, Swarna, IR-36, etc.
- Complete the intercultural operations in jute. Under prevalent weather situation, there is a chance of the attack of weevil. To control it, apply 2ml Endosulphan per litre of water. At present attack of jute semilooper, bihar hairy caterpillar and stem weevil is becoming severe. To control it apply Dichlorvos @ 3 ml per 4 litre of water or Endosulphan 2 ml per litre of water.
- In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of Red-Pumpkin Beetle in the weather condition. To control the pest, apply Dimecron or Rogor (1ml per litre of water).

Haryana

Rainfall received over Haryana is 1.0 mm rainfall (92% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Farmers are advised to apply light irrigation with short interval at morning or evening hours in existing nursery in paddy.
- Due to possibilities of variable weather or light rain in next two days, farmers are advised to do the hoeing in cotton crops for conserving the moisture and removing the weeds.
- Farmers are advised for field preparation and procure the certified seeds for sowing of guar, bajra, maize, cluster bean after pre monsoon rain.

Uttarakhand

Rainfall received over Uttarakhand is 28.5 mm rainfall (39% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Three weeks old seedlings of paddy (irrigated) may be transplanted if sufficient water is available for puddling. Apply Butachlor herbicide as per recommendation within 1-3 days of transplanting.
- Hoeing and weeding should be done in pigeon pea. Apply bio-fungicide in field during inter-culture operations to minimize the pathogen attack.
- Farmers are advised to stop irrigation before few days of harvesting in onion and garlic.
- Transplanting may be done in tomatoes, chillies, capsicum, brinjal and cucurbitaceous crops. Light irrigation must be applied after planting. Black polythene can be used as mulch to avoid weed emergence.

Himachal Pradesh

Rainfall received over Himachal Pradesh is 1.0 mm rainfall (92% deficit) during 01 to 13 June 2019. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- It is also optimum time for nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house.
- Continue to apply light irrigation daily in rice nursery.
- Ensure deep ploughing of fields after harvesting of *rabi* crops. It helps in destroying the eggs and pupating stages of insects and weed seeds.

Jammu

Rainfall received during 01 - 13 June 2019 over Jammu is 57.1 mm, which is 147% excess. The extended range weather forecast for next two weeks (14-20 and 21-27 June) is below normal for both the weeks.

- Farmers are advised to maintain the regular supply of water to save the germinating and growing rice seedlings from intense heat. Preferably water should be applied during morning and late evening hours.
- Due to high infestation of fruit and shoot borer in brinjal at present situation, clip off shoots/fruits infected with borer and bury them inside the soil. Spray mixture of Profenphos + Cypermethrin (4:40) @ 1ml/litre of water at 10 days interval after harvesting of fruit to control infestation of borers.

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