BRINGING KRISHI AND VIGYAN TOGETHER

Krishi Care & Management Services Pvt.Ltd.

# KHARIF 2021 PROGRESSION REPORT

## - 15th June 2021

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# CHATTISGARH

Out of the total geographical area of 137.36 lakh hectares of Chattisgarh, 34.80% i.e. 47.79 lakh ha is the net sown area.

## Kharif Major Crops

Paddy is the principal crop and the central plains of Chattisgarh are known as rice bowl of central India. Other major crops include gram, maize and tur. Soybean, rape and mustard seed are also grown in some parts of the state.

## Agro-climatic Zones of Chattisgarh

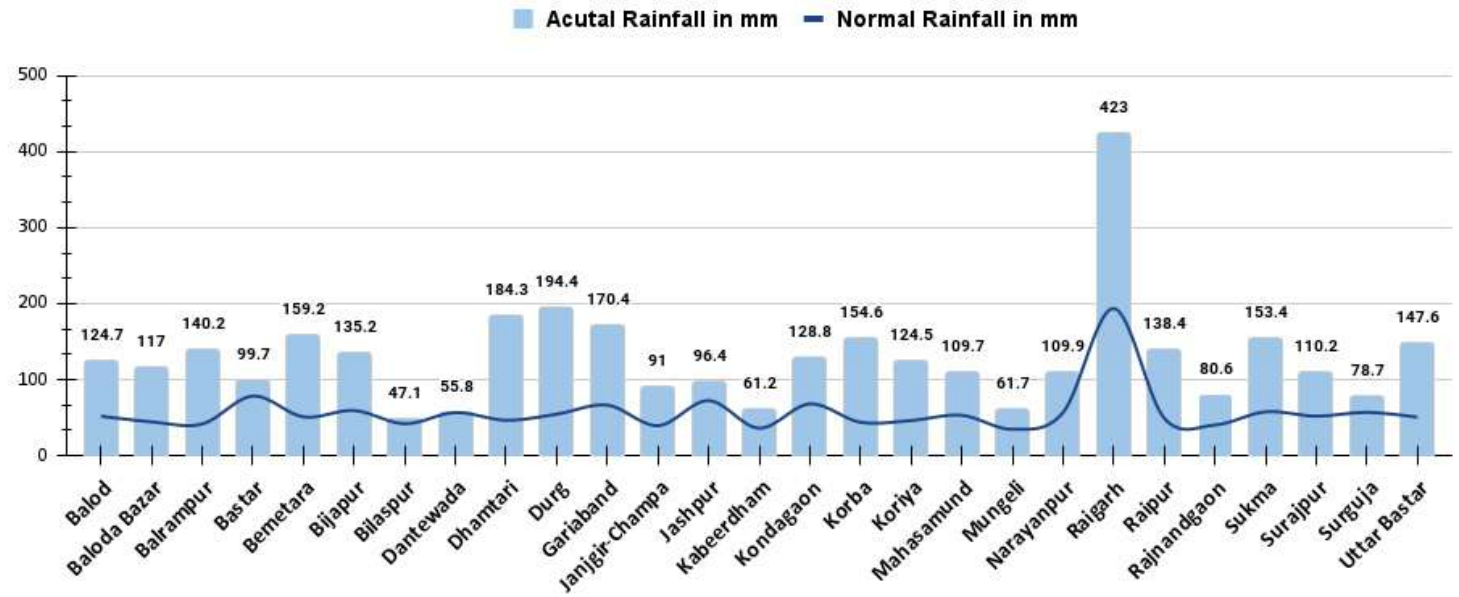
| S. No. | Agro-Climatic zone | Districts |
|---|---|---|
| 1 | Bastar Plateau Zone | Sukma, Narayanpur, Kondagaon, Dantewada, Bijapur, Bastar |
| 2 | Chhattisgarh Plain Zone | Rajnandgaon, Raipur, Raigarh, Mungeli, Mahasamund, Korba, Kanker, Kabirdham, Janjgir-Champa, Gariaband, Durg, Dhamtari, Bilaspur, Bemetara, Baloda Bazar, Balod |
| 3 | North Hills Zone | Surguja, Surajpur, Korea (Koriya), Jashpur, Balrampur |

## Reservoir Storage Status

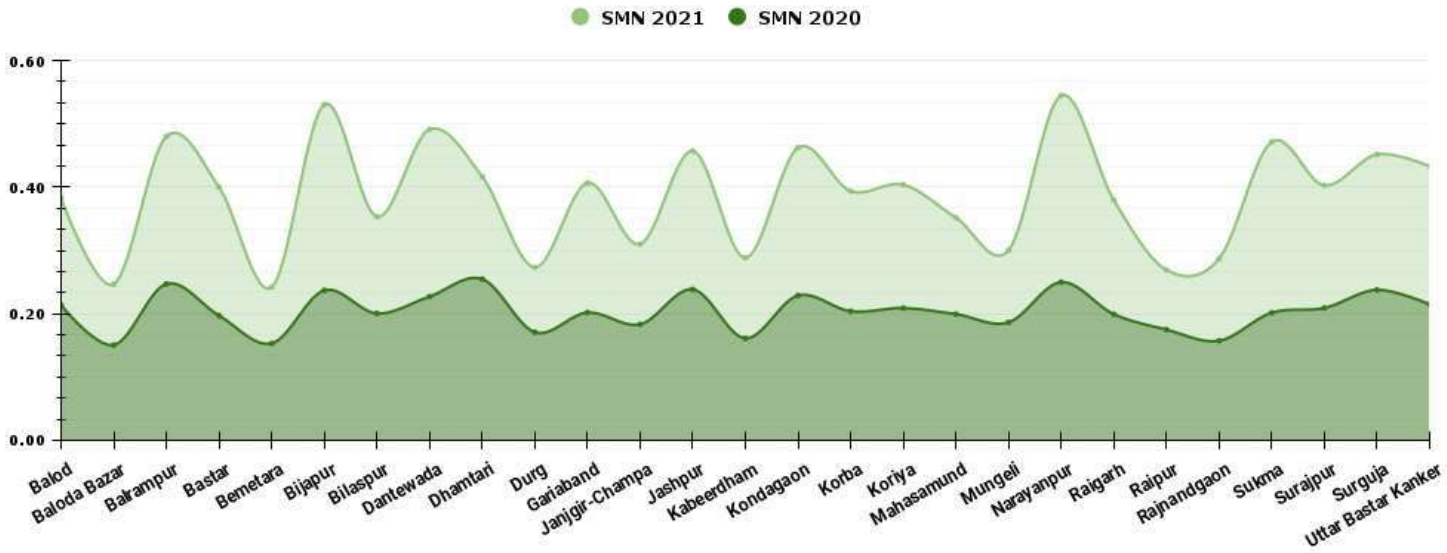
| NAME OF RESERVOIR | FRL (MTS | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| MINIMATA BANGO | 359.66 | 3.046 | 351.90 | 1.693 | 355.80 | 2.254 |
| MAHANADI | 348.7 | 0.767 | 342.53 | 0.291 | 342.47 | 0.287 |
| DUDHAWA | 425.1 | 0.284 | 418.41 | 0.082 | 421.05 | 0.135 |
| TANDULA | 332.2 | 0.312 | 322.97 | 0.026 | 325.04 | 0.061 |

| LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST YEARS STORAGE |
|---|---|
| 74 | 75 |
| 37 | 101 |
| 48 | 61 |
| 20 | 43 |

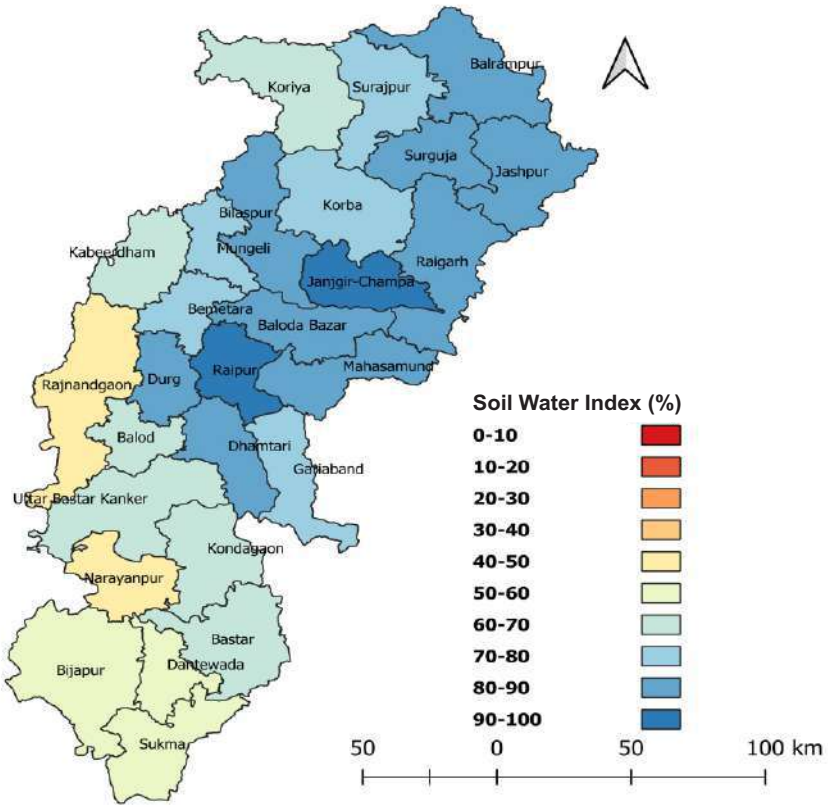
## Rainfall



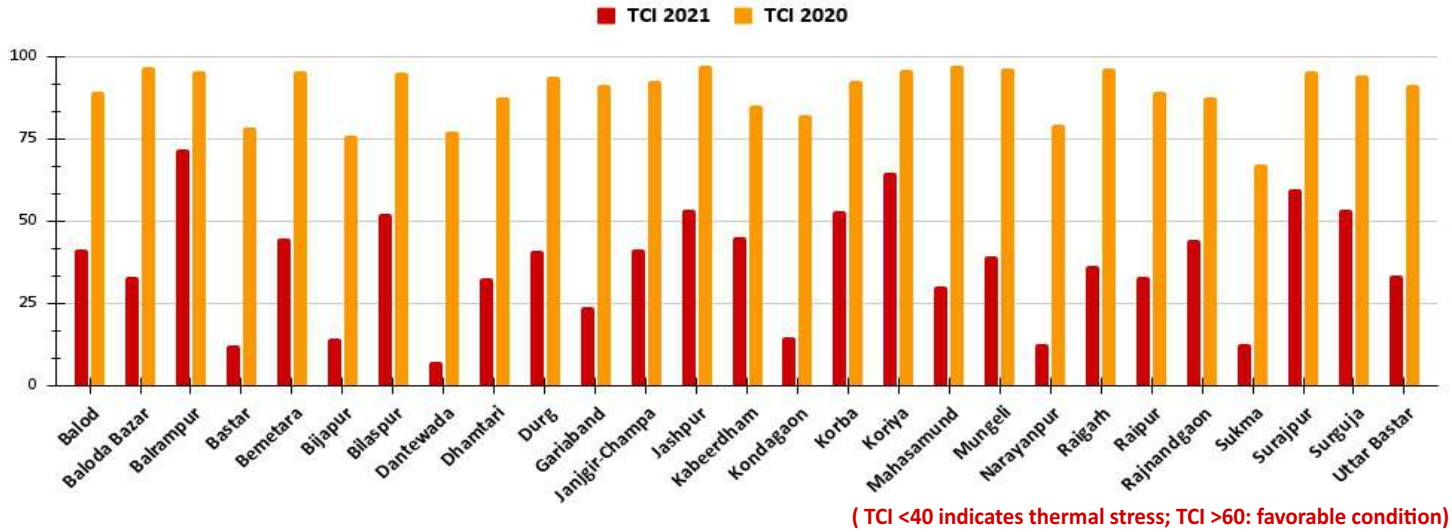
## Smoothed Normalized Difference Vegetation Index (SMN)




## Soil Water Index

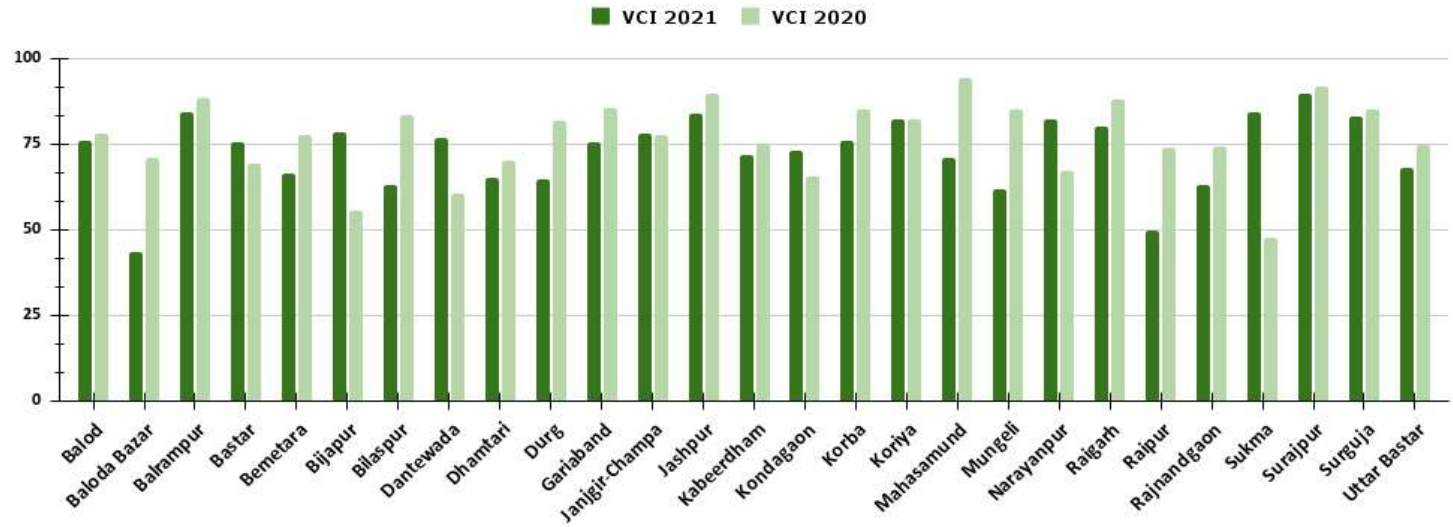


## Temperature Condition Index (TCI)



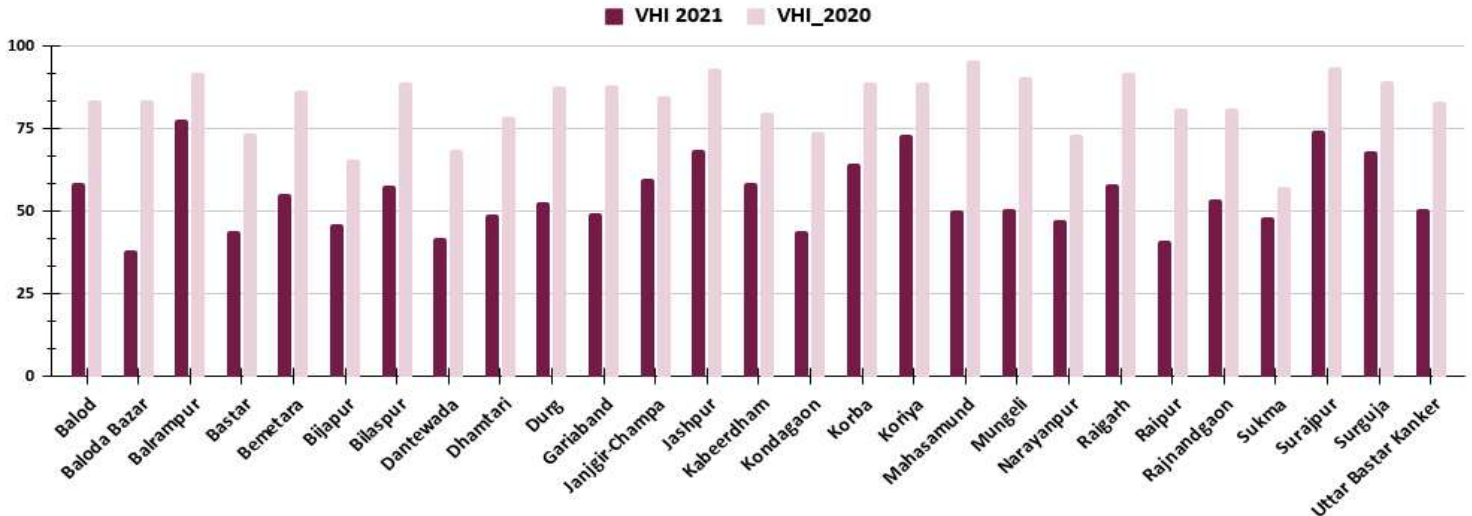

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Chhattisgarh | Balod,Bemetara,Bilaspur,Dhamtari, Durg,Gariabandh,Janjgir,Kabirdham, Mungeli,Raigarh,Raipur | Soybean | Seed rate- 65 Kg./ ha. Plant to plant distance is kept 7-10 cms and row to row ddistance should be kept 30 cms. Soybean and other pulse crops should be sown after seede treatment with Rhizobium culture @ 5 grams and PSB @ 10 grams per Kg. seed . |
| | | Paddy | Seed Rate -Line sowing: 80-90 Kg./ ha. The spacing should be kept from row to row -20 cms Biasi and Broadcast method: 100-120 Kg./ ha. Seed treatment - Azospirillum and PSB @ 5-10 gram per kg of seed should be done before sowing<br>1. 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.<br>2. Early and medium duration varieties should be sown in lines, rice crop matures early in this situation and biasi is also not required.<br>3. Line sowing can be done after field preparation. Line sowing can be done by seed cum fertilizer drill in lines in well pulverized field. In the levelled fields, seed sowing should be done at a distance of 20 cms through tractor drawn seed drill, Indira seed drill, Nari plough, Bhoramdev seed drill and nari plough. The seed depth should not be more than 3-4 centimeters. Calibration of seed drill is required for perfect maintaining of seed rate. Calibration must be done before sowing operation. 4. Recommended fertilizers should be applied and granular fertilizers should be applied through seed drill |
| | | Maize | Seed rate- Hybris : 15-20 Kg./ ha. Composite: 20-25 Kg./ ha. Row to row distance should be kept 60-75 cms and plant to plant distance<br>should be maintained 20-25 cms. Medium and late duration varieties should be maintained at a distance of 75x25 cms. |
| Chhattisgarh | Balodabazar | Soybean | Seed rate- 65 Kg./ ha. Plant to plant distance is kept 7-10 cms and row to row ddistance should be kept 30 cms. Soybean and other pulse crops should be sown after seede treatment with Rhizobium culture @ 5 grams and PSB @ 10 grams per Kg. seed . |
| | | Maize | Seed rate- Hybris : 15-20 Kg./ ha. Composite: 20-25 Kg./ ha. Row to row distance should be kept 60-75 cms and plant to plant distance should be maintained 20-25 cms. Medium and late duration varieties should be maintained at a distance of 75x25 cms. |
| Chhattisgarh | Bastar,Jashpur | Maize | Farmers are advised to go for sowing of kharif maize by using suitable high yielding varieties like M.C.H – 42, S – 6217, VIVEK HYBRID MAIZE – 27, SHAKTIMAN – 4, SHAKTI – 1, PRATAP MAIZE – 5. Use seed @ 12 – 15 kg per hectare for hybrid maize. Seeds should be treated with fungicide like captan or thiram @ 1.5 gram per kg of seed for better germination percentage. Sow the seeds in line with spacing of 60 X 20 cm at 5 cm depth. Apply 1/3 of Nitrogen and all of phosphorus & Potash as a basal dose. |
| | | | Farmers are advised to prepare the field for cultivation of maize crop, for preparation dig the field with plough followed by cultivator for 2 – 3 times to make the field fine. |
| Chhattisgarh | Bijapur | Maize | Farmers are advised to prepare the field for cultivation of maize crop, for preparation dig the field with plough followed by cultivator for 2 – 3 times to make the field fine |
| Chhattisgarh | Kondagaon,Sukma | Maize | Farmers are advised to go for sowing of kharif maize by using suitable high yielding varieties like M.C.H – 42, S – 6217, VIVEK HYBRID MAIZE – 27, SHAKTIMAN – 4, SHAKTI – 1, PRATAP MAIZE – 5. Use seed @ 12 – 15 kg per hectare for hybrid maize. Seeds should be treated with fungicide like captan or thiram @ 1.5 gram per kg of seed for better germination percentage. Sow the seeds in line with spacing of 60 X 20 cm at 5 cm depth. Apply 1/3 of Nitrogen and all of phosphorus & Potash as a basal dose. |
| | | | Farmers are advised to prepare the field for cultivation of maize crop, for preparation dig the field with plough followed by cultivator for 2 – 3 times to make the field fine. |
| Chhattisgarh | Korea | Maize | In the upland and unbunded fields, the crops like maize, green gram, black gram and sesamum can be cultivated. There should be proper water drainage measures. |
| Chhattisgarh | Mahasamund | PIGEON PEA (RED GRAM/ARHAR) | Seed rate- 15=20 Kg./ ha. In early duration varieties, row to row distance should be maintained 60 cms and plant to plant distance should be maintained 15cms. Arhar and other pulse crops should be sown after seede treatment with Rhizobium culture @ 5 grams and PSB @ 10 grams per Kg. seed. |
| | | Maize | Seed rate- Hybris : 15-20 Kg./ ha. Composite: 20-25 Kg./ ha. Row to row distance should be kept 60-75 cms and plant to plant distance should be maintained 20-25 cms. Medium and late duration varieties should be maintained at a distance of 75x25 cms |

# HARYANA

The cultivable area is 3.809 million hectare (86.2%of total geographical area) and the net area sown is 3.566 million hectare (93.6% of cultivable area) and the percentage of net irrigated sown area is 82.3%.

## Kharif Major Crops

The main crops in the state include sugarcane, groundnut, maize and paddy etc. The minor Kharif crops are Chillies, Bajra, Jowar, Pulses and vegetables.

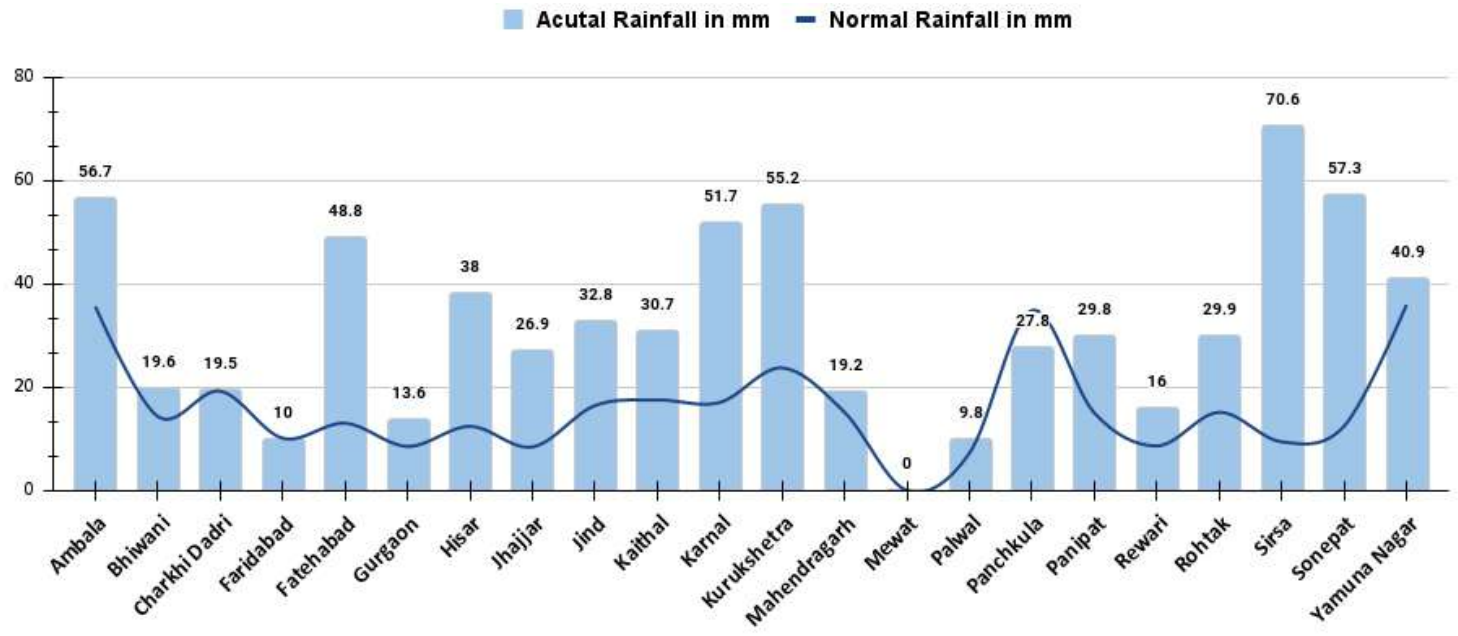
## Agro-climatic Zones of Haryana

| S. N. | Agro-Climatic Regions | Districts |
|---|---|---|
| 1 | Eastern Zone | Ambala, Faridabad, Gurgaon, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Panipat, Rohtak, Sonipat, Yamunanagar |
| 2 | Western Zone | Bhiwani, Fatehabad, Hisar, Mahendragarh, Rewari, Sirsa |

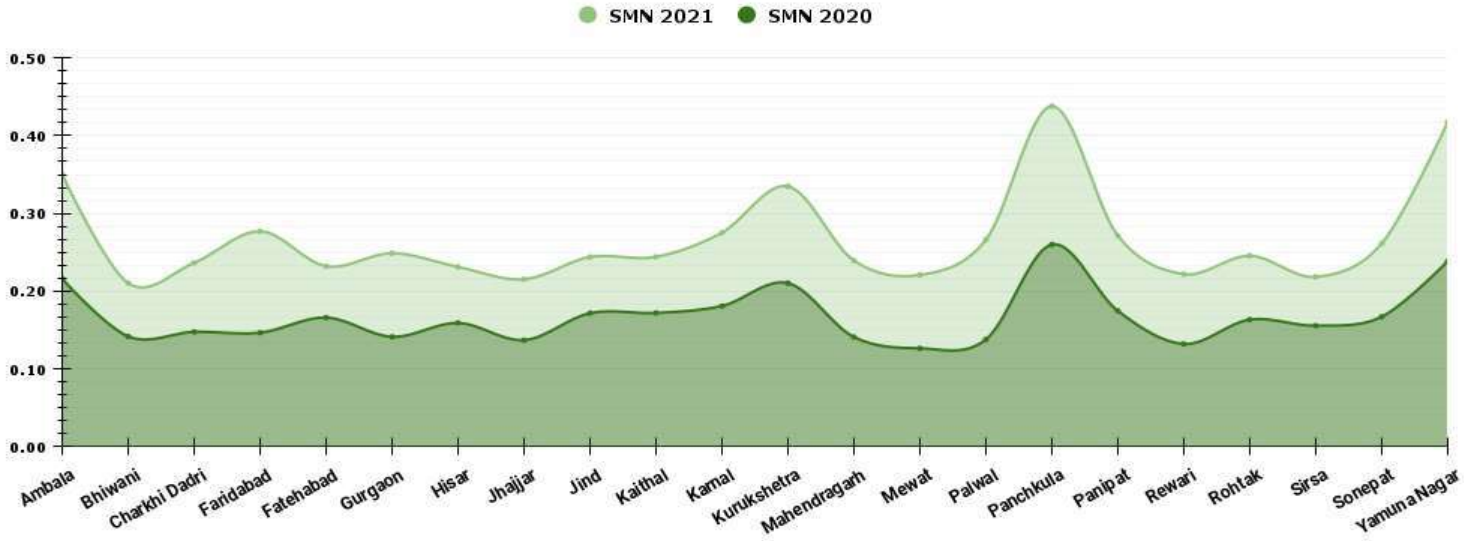
## Reservoir Storage Status

Not Available

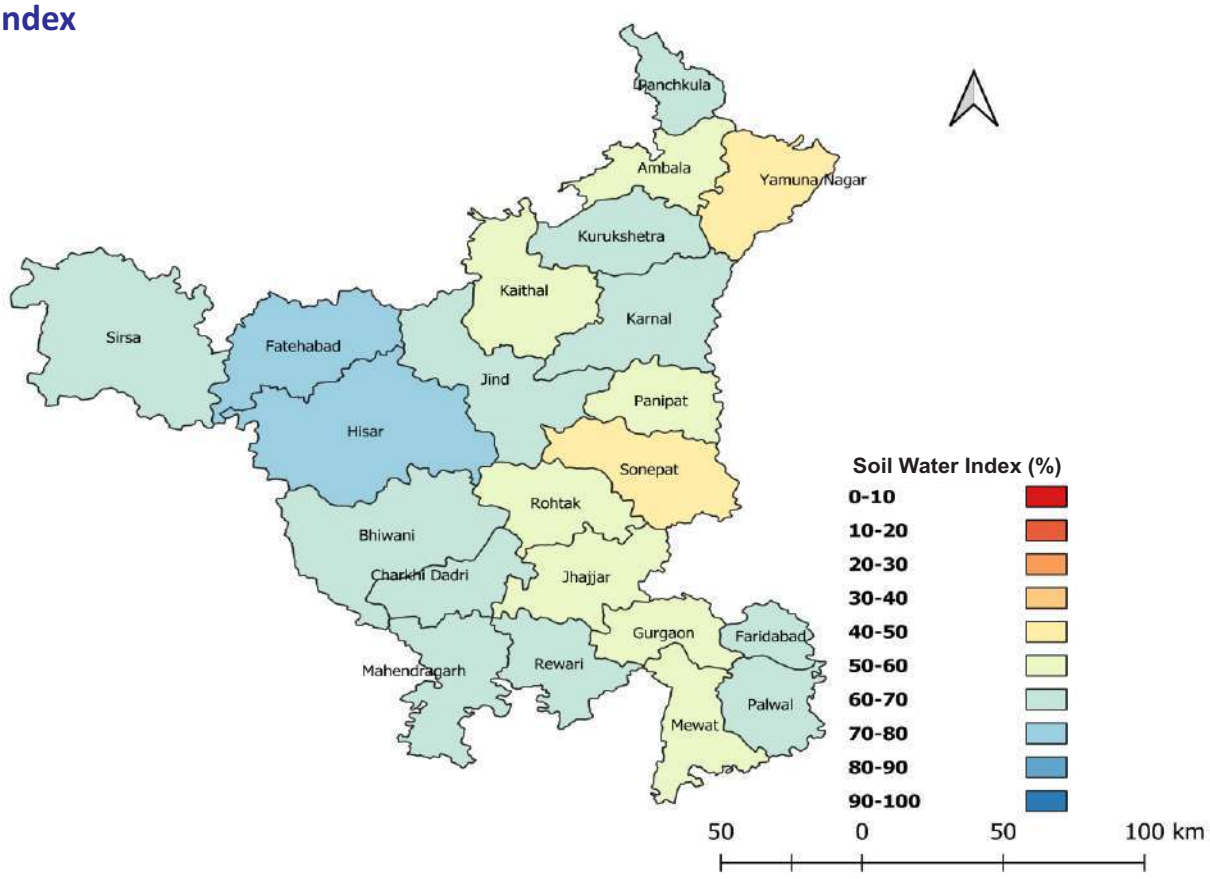
## Rainfall



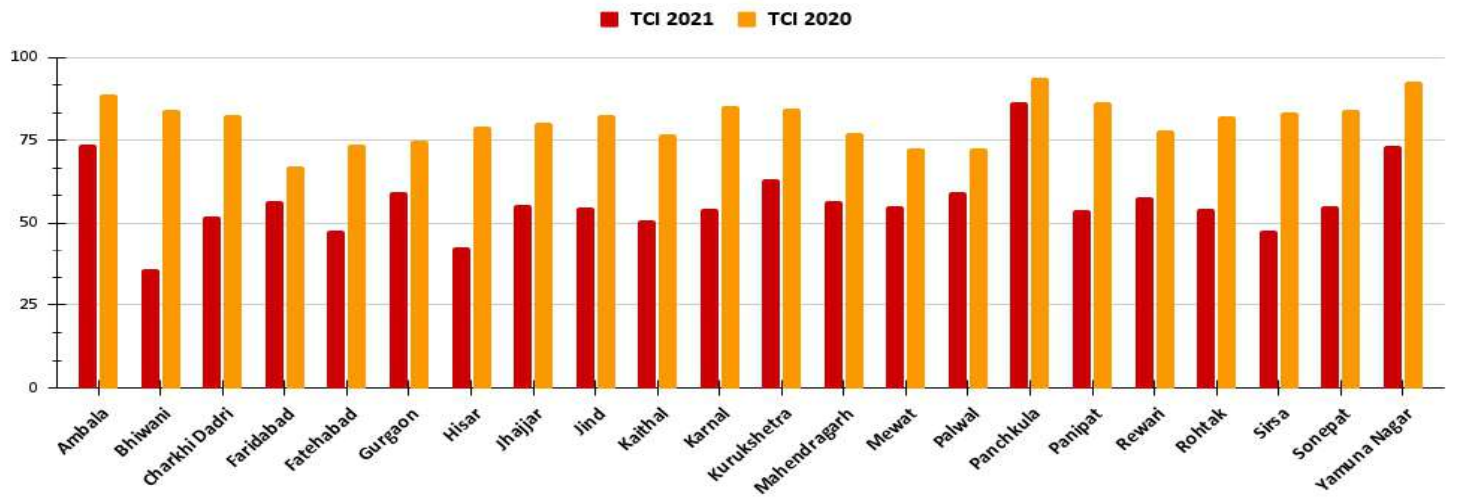
## Smoothed Normalized Difference Vegetation Index (SMN)




## Soil Water Index

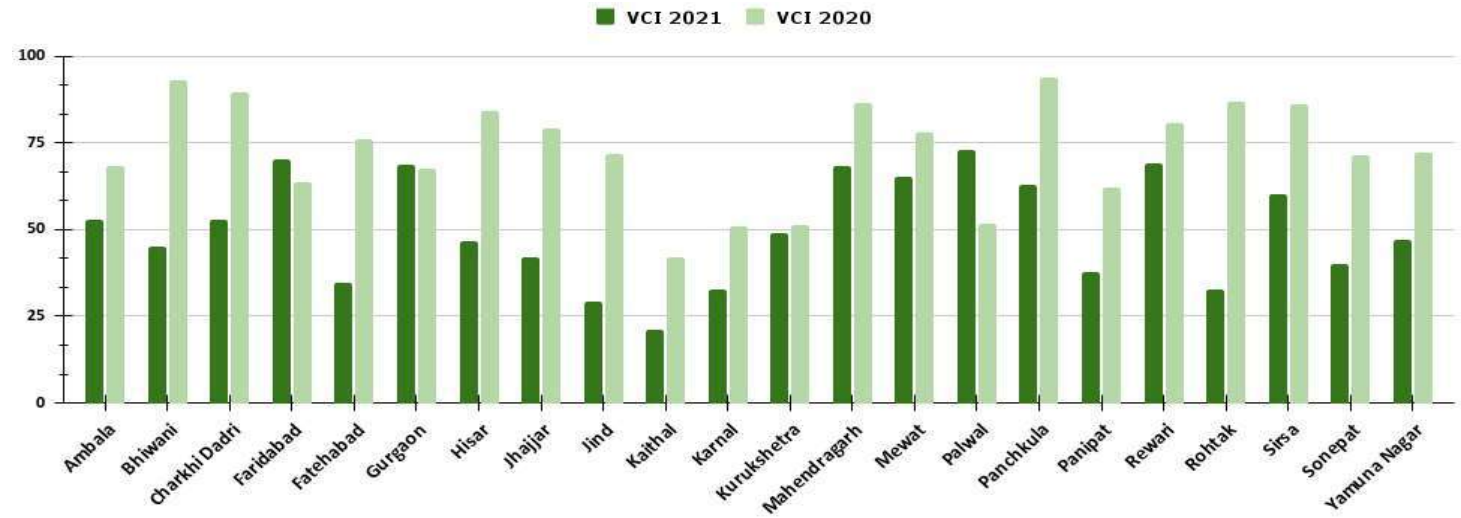


## Temperature Condition Index (TCI)




( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)

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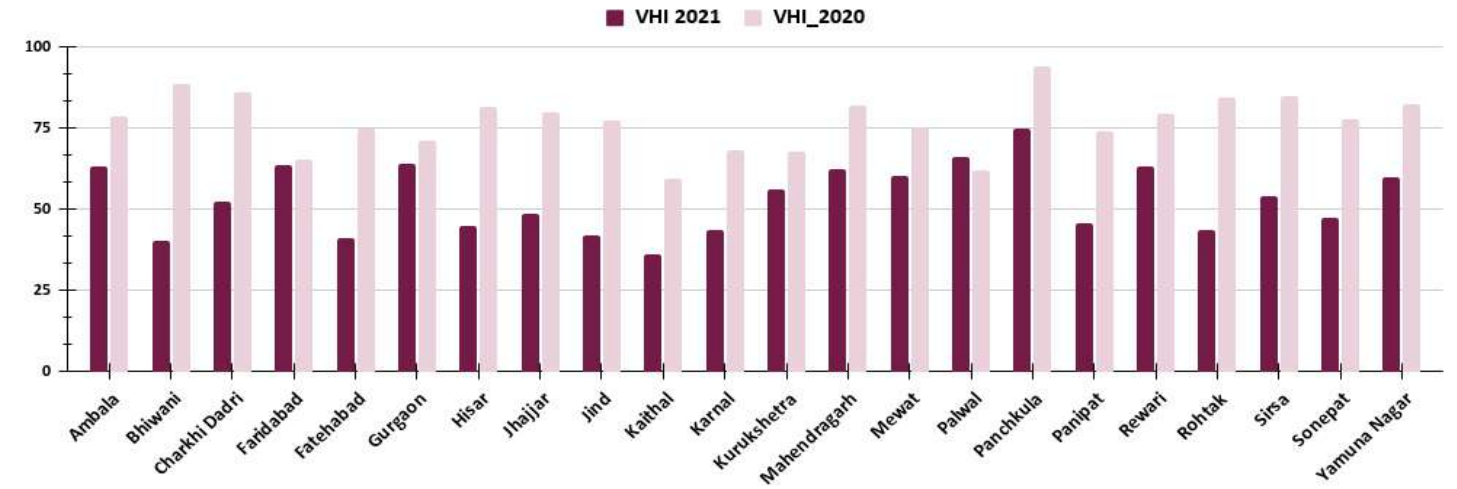
## Vegetation Health Index (VHI)

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( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

# Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Haryana | Ambala | Rice | In Paddy, farmers are advised to complete the transplantation of paddy before 30 June |
| Haryana | Bhiwani | Cotton,Pearl Millet | Due to possibility of variable weather farmers are advised to keep weather in mind during irrigation and harrowing. |
| Haryana | Charkhi Dadri | Cotton,Pearl Millet | Due to possibility of variable weather farmers are advised to keep weather in mind during irrigation and harrowing. |
| Haryana | Faridabad | Rice | Constant monitoring of paddy nurseries against attack of bakanae disease is advised. Spraying of Carbendazim @ 2.0 gram per litre of water is advised. • In the paddy nursery, if upper leaves of the paddy seedlings become yellow and lower leaves remain green, it indicates the iron deficiency. Spraying of ferrous sulphate @ 0.5 % with 0.25% lime solution is recommended to overcome this problem |
| Haryana | Fatehabad | Rice | If yellowing occurs in the nursery, then spray the solution by making a solution of 0.5% zinc sulfate, 0.5% fersulfate and 2.5% urea. Repeat this spray at an interval of 4-5 days as per need. To prevent Bakani disease in paddy, 7 days before uprooting of the rice plant, sprinkle 250 grams of Carbendazim per half kanal in the sand in the nursery area. Uprooting rice plant in standing water only. |
| | | Sesame (Gingelly/Til) | Sesame can be sown from the onset of rain till July, for sowing, use improved varieties- HT-2,C 50 and RT-40. Use seed rate of 2-2.5 kg per hectare. Seed treatment Treat with thiram or Captan @ 3 gm per kg of seed. Use 15 kg Nitrogen, 25 kg Phosphorous at the time of sowing. |
| | | Cotton | The outbreak of thrips or churda is commonly seen in the cotton crop in the month of June. Use recommended insecticides only when the number of thrips reaches 10 or more per leaf. Do not use any highly toxic insecticides or mixtures of insecticides for thrips. If required, apply 1 liter of neem based insecticides like Nimbicidine or Achuck at the rate of 150-200 liters of water per acre for the first 2-3 sprays. Keep complete information about all the insecticides and fungicides used in the cotton crop. Do not cultivate lady's finger along with the cotton crop, as this increases the number of sucking insects |
| Haryana | Gurgaon | Rice | Constant monitoring of paddy nurseries against attack of bakanae disease is advised. Spraying of Carbendazim @ 2.0 gram per litre of water is advised. • In the paddy nursery, if upper leaves of the paddy seedlings become yellow and lower leaves remain green, it indicates the iron deficiency. Spraying of ferrous sulphate @ 0.5 % with 0.25% lime solution is recommended to overcome this problem |
| Haryana | Hisar | Rice | Irrigation and manure management must be done as per the requirement in the paddy nursery. If yellowing occurs in the nursery, then spray 0.5% zinc sulphate, 0.5% fersulfate and 2.5% urea solution. Repeat this spray at an interval of 4-5 days as per need. Remove unwanted and diseased plants in the nursery so that good quality seedlings can be produced. To prevent lilac disease in paddy, 7 days before uprooting the seedlings 250 Sprinkle one gram of Carbendazim per half kanal in the nursery area mixed with sand and spread in the seedling. Soak the paneer in standing water only.Prepare the field well for planting paddy and store the moisture. If water is available, start planting paddy. |
| | | Pearl Millet | For the sowing of millet, arrange seeds of good varieties and if there has been good rain, then sow it when the weather is clear. |
| | | Cotton | Manage irrigation and insect pest control in the cotton crop. |
| Haryana | Jhajjar | Cotton | Farmers are advised to do the hoeing-harrowing and eradicate the weeds. Regular surveillance of termite, thrips and white fly insects on cotton should be done |
| | | Pigeon Pea (Red Gram/Arhar) | For sowing of Pigeon pea/ Arhar, farmers are advised to prepare the field for sowing and procure the good quality seed. Conserve the moisture in the field. Mid June to July is favourable time for sowing of this crop. Farmers can sow the crop if field have optimum soil moisture. |
| | | Pearl Millet | Prepare the field for crops like pearl millet/ guar and conserve the soil moisture and procure the good quality seeds from reliable source. Farmers can sow the crop if field have optimum soil moisture. |
| | | Rice | Provide the need based irrigation and fertilizer to the nursery of rice crop. If there is yellowness in nursery then spray 0.5 % zinc sulphate, 0.5 % ferrous sulphate and 2.5 % urea mixture in 4-5 days interval according to the need of crop plants. |

| | | | |
|---|---|---|---|
| Haryana | Jind | Rice | Farmers are advised tp apply irrigation and manure in paddy nursery as per requirement, for transplanting paddy, prepare the field properly and store the moisture in it. Farmers are also advised to spray 0.5% zinc sulphate, 0.5% ferrous sulphate and 2.5% urea solution during yellowing in nursery, if required repeat this spray at an interval of 4-5 days. Sprinkle 250 grams of Carbendazim per half kanal by mixing with sand in the nursery, 7 days before uprooting of the panicle to prevent lilac disease in paddy. Uproot the saplings in standing water only. Water stagnation during the daytime in nursery is very harmful for the young seedlings due to intense sunlight. |
| | | | Therefore to avoid water stagnation in nursery during daytime farmers are advised to apply irrigation during evening hours. |
| | | Green Gram | Due to possibility of rainfall, farmers are advised to withhold the spray and irrigation in late sown Moong crop. Farmers are also advised to keep weather conditions in mind during picking of mature pods in early or timely sown Moong crop. Incorporate the green biomass after complete picking of mature pods for green manuring. |
| | | Cotton | Farmers are advised to uproot the plants withered by the disease to prevent further spread of the disease. Farmers are also advised to keep regular watch at their field because this weather is favourable for the incidence of cotton leaf curl virus disease and thrips in cotton crop, if any plant is found infested with the disease, immediately uproot it and destroy it whereas in case of thrips attack, use recommended insecticide only when the number of thrips reaches 10 or more per leaf. Do not grow ladyfinger along with the cotton crop, as this increases the number of sucking insects-pests in cotton crop. Due to possibility of rainfall, farmers are advised to withhold the spray and irrigation in Cotton crop |
| | | Pearl Millet | Farmers are advised to prepare the field and conserve the soil moisture for pearl millet sowing. |
| Haryana | Kaithal | Maize | This season is suitable for sowing of maize, so farmers are requested to sow maize. |
| | | | For sowing of maize, sow 8 kg/acre seed. • Sow maize in high altitude fields only. so that the water can be drained. • Do sowing on ridges only. • To protect the crop from diseases seed treatment is necessary. Seed should be treated with 4 gram thiram or captan 2.5 gram for the management of seed born disease and 7 gm imidacloprid against termites per kg seed. |
| | | Rice | For protection against bakanae disease in paddy crop, spray of 250 grams of Carbendazim per half kanal in the sand before uprooting of 7 days in the nursery Soak the transplant in standing water only. |
| | | Pigeon Pea (Red Gram/Arhar) | The farmers who want to sow red gram, they should sow red grain when the wattar comes in the field. |
| Haryana | Karnal | Rice | Dry and hot weather farmers are advised to apply the needful light irrigation in existing/standing paddy nursery. Farmers are advised to prepare the paddy/scented paddy nursery to add 10 to 12 cart compost khad/organic fertilizer with certified seed of paddy. Before the sowing of paddy seed it should be treated with 10 g Bavistin or 10 g Amissan + 2.5g Pausamycine or 1g Streptocycline solution mixed with 10 liter water and soaked 10-12 kilogram paddy seed kept it up to 24 hrs, then filter it and spread on cemented floor cover with gunny bags, left it 24-36 hrs and spray/apply time to time water to avoid the sprouting. |
| | | Cotton | Keeping in view of dry and hot weather farmers are advised to apply irrigation in timely sown cotton. |
| | | Fodder Maize | Keeping in view of dry and hot weather farmers are advised to apply irrigation. |
| Haryana | Kurukshetra | Maize | This season is suitable for sowing of maize, so farmers are requested to sow maize. |
| | | | For sowing of maize, sow 8 kg/acre seed. • Sow maize in high altitude fields only. so that the water can be drained. • Do sowing on ridges only. • To protect the crop from diseases seed treatment is necessary. Seed should be treated with 4 gram thiram or captan 2.5 gram for the management of seed born disease and 7 gm imidacloprid against termites per kg seed. |
| | | Rice | For protection against bakanae disease in paddy crop, spray of 250 grams of Carbendazim per half kanal in the sand before uprooting of 7 days in the nursery Soak the transplant in standing water only. |
| | | Pigeon Pea (Red Gram/Arhar) | The farmers who want to sow red gram, they should sow red grain when the wattar comes in the field. |
| Haryana | Mahendragarh | Cotton | Due to possibility of variable weather conditions after 48 hours, farmers are advised to keep weather in mind while hoeing-harrowing in cotton crop to avoid weeds and conserve soil moisture in soil. |
| | | Pearl Millet | Due to possibility of variable weather conditions after 48 hours, farmers are advised to keep weather in mind sowing of bajra crop. |

| | | | |
|---|---|---|---|
| Haryana | Mewat,Palwal | Rice | Constant monitoring of paddy nurseries against attack of bakanae disease is advised. Spraying of Carbendazim @ 2.0 gram per litre of water is advised. • In the paddy nursery, if upper leaves of the paddy seedlings become yellow and lower leaves remain green, it indicates the iron deficiency. Spraying of ferrous sulphate @ 0.5 % with 0.25% lime solution is recommended to overcome this problem |
| Haryana | Panipat | Rice | Irrigate the rice nursery in the evening as per need to ensure that there is no water stagnation in the nursery bed during daytime. Apply urea @ 25Kg/acre nursery area in 10-14 days old nursery. apply Ferrus sulphate @ 0.5% for healthy nursery. Transplanting of Rice has commenced . Start the transplanting work with long duration varieties |
| | | Green Gram | Harvest the mature pods to collect grain from summer moong. 2-3 pickings are possible depending upon the date of transplanting paddy. Incorporate the green biomass for green manuring |
| Haryana | Rewari | Cotton | Due to possibility of variable weather conditions after 48 hours, farmers are advised to keep weather in mind while hoeing-harrowing in cotton crop to avoid weeds and conserve soil moisture in soil. |
| | | Pearl Millet | Due to possibility of variable weather conditions after 48 hours, farmers are advised to keep weather in mind sowing of bajra crop. |
| Haryana | Rohtak | Rice | For those farmers who have done direct sowing of paddy, then first irrigation should be done after 21 days of sowing and one third of the recommended quantity of urea must be applied after watering. >>Irrigation and fertilizer management must be done as per the requirement in the paddy nursery. >>Prepare the field well for paddy planting and store the moisture. If water is available, start planting paddy |
| | | Cotton | If there is water logging in the field after rain, then make proper arrangements for drainage from the field. |
| Haryana | Sirsa | Rice | Irrigation and manure management must be done as per the requirement in the paddy nursery. If yellowing occurs in the nursery, then spray 0.5% zinc sulphate, 0.5% fersulfate and 2.5% urea solution. Repeat this spray at an interval of 4-5 days as per need. Remove unwanted and diseased plants in the nursery so that good quality seedlings can be produced. To prevent lilac disease in paddy, 7 days before uprooting the seedlings 250 Sprinkle one gram of Carbendazim per half kanal in the nursery area mixed with sand and spread in the seedling. Soak the paneer in standing water only.Prepare the field well for planting paddy and store the moisture. If water is available, start planting paddy. |
| | | Pearl Millet | For the sowing of millet, arrange seeds of good varieties and if there has been good rain, then sow it when the weather is clear. |
| | | Cotton | Manage irrigation and insect pest control in the cotton crop. |
| Haryana | Sonipat | Cotton | Due to possibility of light rainfall on 27 June, farmers are advised to keep weather in mind while hoeing-harrowing in cotton crop to avoid weeds and conserve soil moisture in soil. |
| | | Rice | Irrigation and manure management must be done in the paddy nursery as per the requirement. Prepare the field well for planting paddy and store the moisture. If water is available, start planting paddy. If there is yellowing in nursery, then spray 0.5% zinc sulphate, 0.5% fersulfate and 2.5% urea solution. Repeat this spray as needed at an interval of 4-5 days. To prevent lilac disease in paddy, seven days before plucking, carbendazim at the rate of 1 gm/sqm should be mixed with sand and spread it evenly in the paneer. |
| Haryana | Yamunanagar | Rice | Farmers who have transplanted paddy should irrigate their paddy crop as the weather is likely to remain dry till June 25. |

# KARNATAKA

The cultivable area of the state is 66.1%. This includes the net sown area (55.1%). The state has 1.3 million ha under paddy cultivation which is both irrigated and rainfed.

## Kharif Major Crops

Maize, Jowar, Great millet, Bajra, Green gram, Groundnut, Cotton and Soybean are the major crops grown in Kharif season.

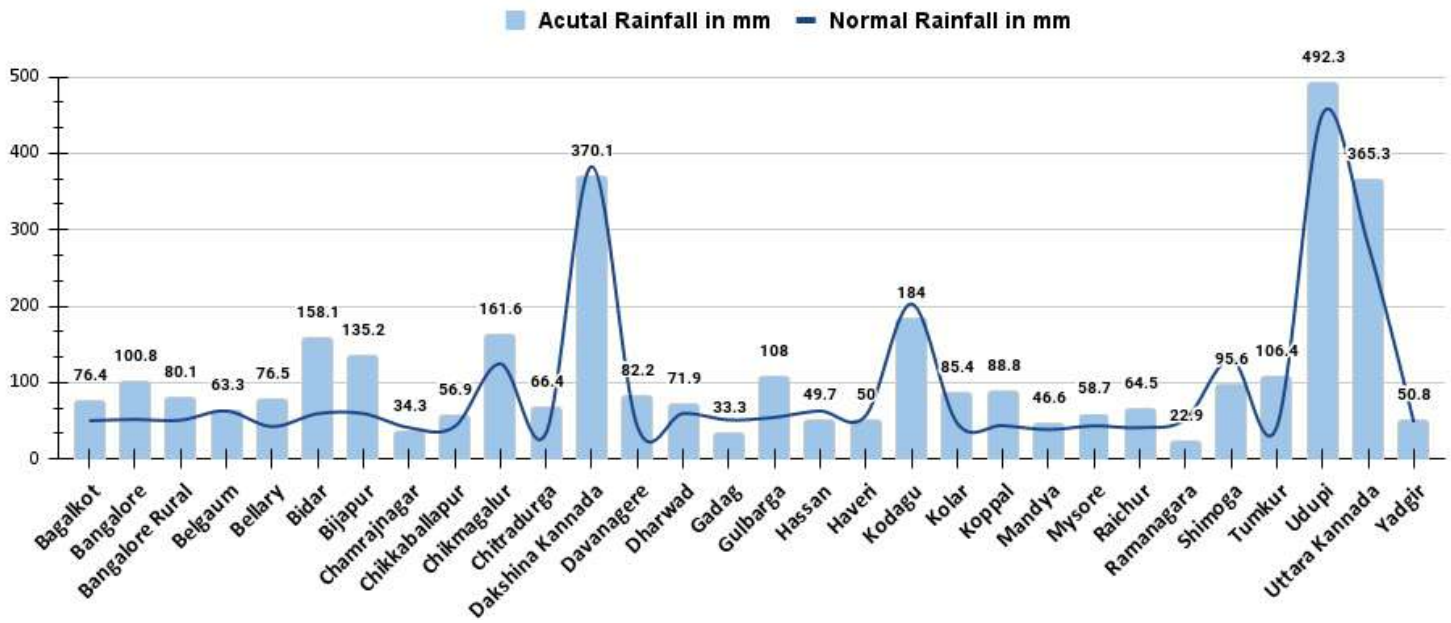
## Agro-climatic Zones of Karnataka

| Sr. No | Agro-Climatic zone | Districts |
|---|---|---|
| 1 | Central Dry Zone | Tumkuru, Davanagere, Chitradurga, Chikkamagaluru |
| 2 | Coastal Zone | Udupi, Dakshina Kannada |
| 3 | Eastern Dry Zone | Kolara, Chikkaballapur, Bengaluru Urban, Bengaluru Rural |
| 4 | Hill Zone | Shivamogga, Kodagu, Uttara Kannada |
| 5 | North East Transition Zone | Bidar |
| 6 | North Eastern Dry Zone | Yadgir, Raichur, Gulbarga |
| 7 | Northern Dry Zone | Bellari, Koppala, Gadag, Dharwad, Vijaypura, Belagavi, Bagalkot |
| 8 | Northern Transition Zone | Haveri |
| 9 | Southern Dry Zone | Mysuru, Mandya, Hassan |
| 10 | Southern Transition Zone | Ramanagar, Chamarajanagar |

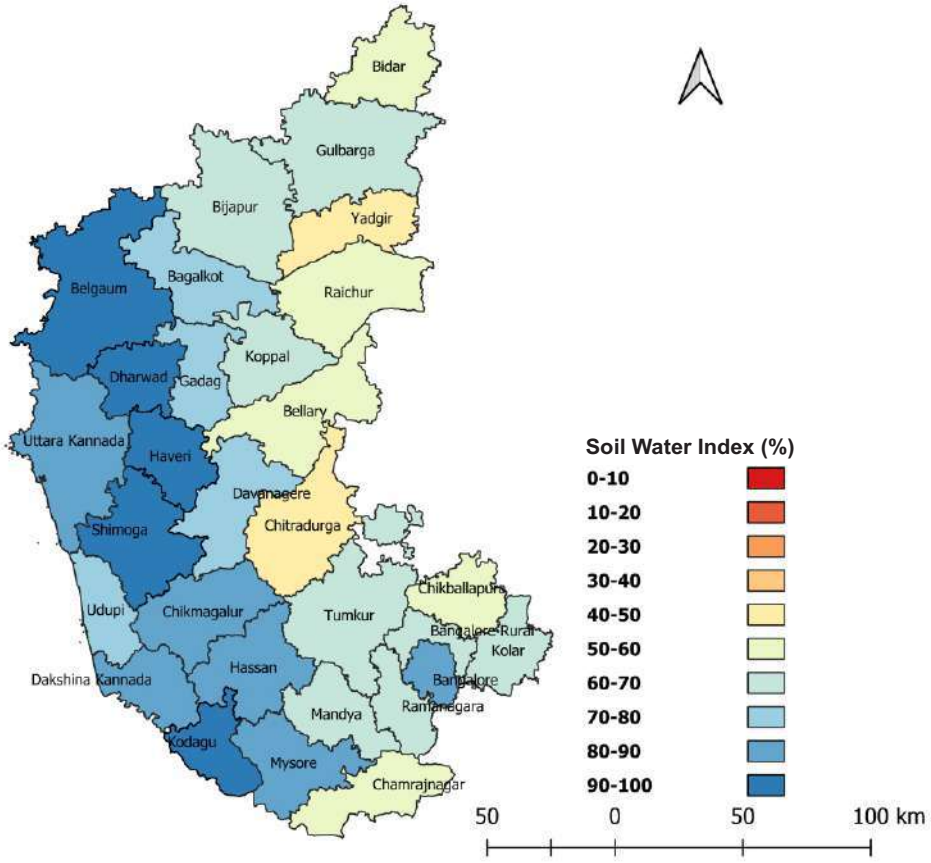
## Reservoir Storage Status

| NAME OF RESERVOIR | FRL (MTS | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | | LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) | | |
| KRISHNARAJA SAGARA | 752.5 | 1.163 | 739.91 | 0.227 | 742.71 | 0.374 | 32 | 61 |
| TUNGABHADRA | 497.74 | 3.276 | 484.72 | 0.285 | 482.86 | 0.174 | 5 | 164 |
| GHATAPRABHA(HIDKAL) | 662.95 | 1.391 | 637.51 | 0.084 | 639.76 | 0.207 | 15 | 41 |
| BHADRA | 657.76 | 1.785 | 644.96 | 0.601 | 642.09 | 0.421 | 24 | 143 |
| LINGANAMAKKI | 554.43 | 4.294 | 542.32 | 1.512 | 536.34 | 0.773 | 18 | 196 |
| NARAYANPUR | 492.25 | 0.863 | 488.71 | 0.350 | 488.80 | 0.358 | 41 | 98 |
| MALAPRABHA(RENUKA) | 633.83 | 0.972 | 624.84 | 0.183 | 625.99 | 0.244 | 25 | 75 |
| KABINI | 696.66 | 0.444 | 690.93 | 0.179 | 689.48 | 0.121 | 27 | 148 |
| HEMAVATHY | 890.63 | 0.927 | 878.24 | 0.251 | 877.93 | 0.240 | 26 | 105 |
| HARANGI | 871.42 | 0.22 | 862.39 | 0.082 | 863.57 | 0.087 | 40 | 94 |
| SUPA | 564 | 4.12 | 536.40 | 1.506 | 530.11 | 1.101 | 27 | 137 |
| VANI VILAS SAGAR | 652.28 | 0.802 | 642.82 | 0.253 | 640.58 | 0.183 | 23 | 138 |
| ALMATTI | 519.6 | 3.105 | 508.95 | 0.366 | 511.00 | 0.647 | 21 | 57 |
| GERUSOPPA | 55 | 0.13 | 50.25 | 0.103 | 49.16 | 0.098 | 75 | 105 |
| MANI DAM | 594.36 | 0.884 | 570.52 | 0.071 | 572.14 | 0.098 | 11 | 72 |
| TATTIHALLA | 468.3 | 0.249 | 452.90 | 0.017 | 450.50 | 0.004 | 2 | 425 |

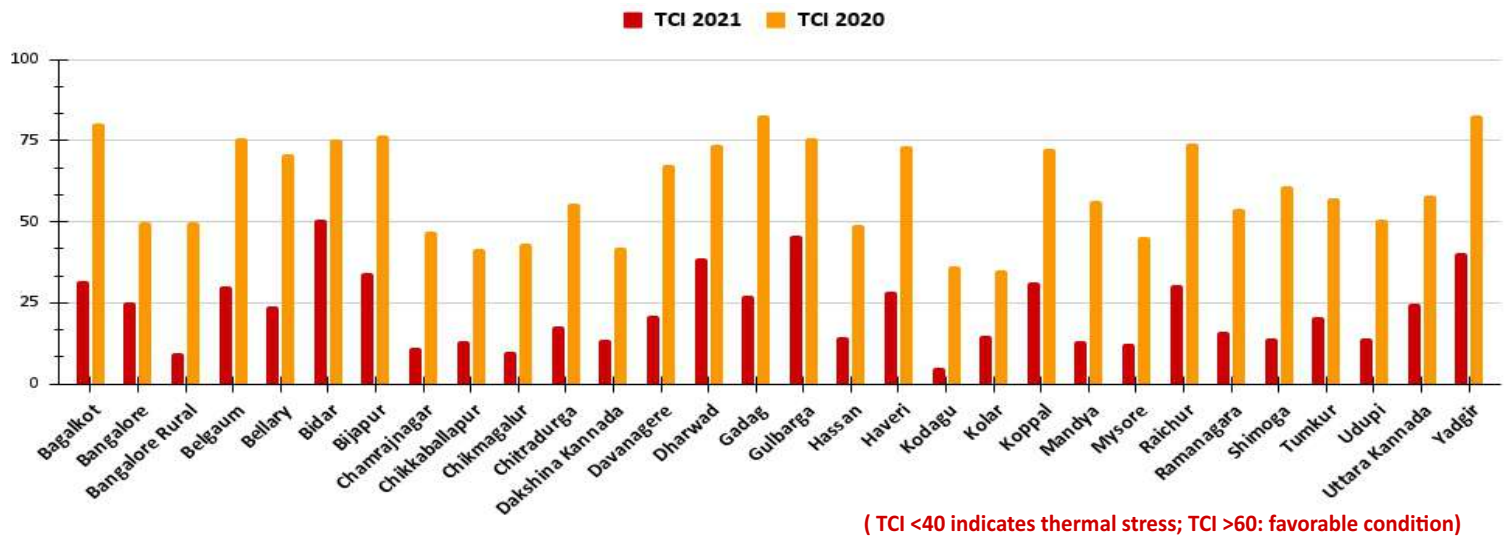
## Rainfall




## Soil Water Index

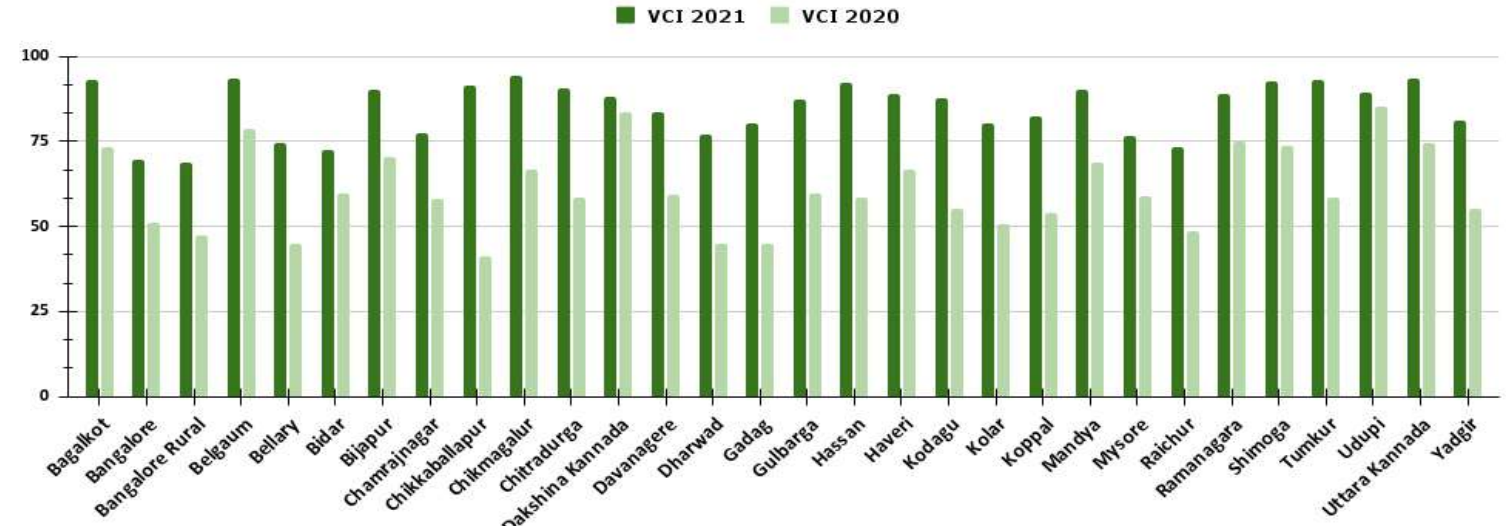


## Temperature Condition Index (TCI)



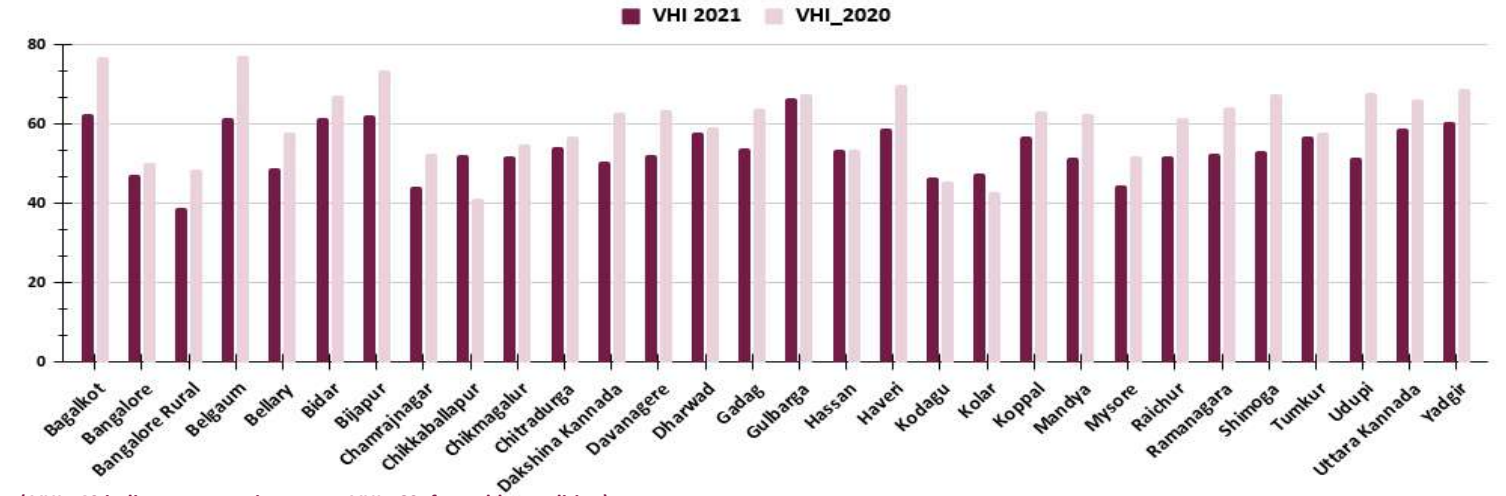

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

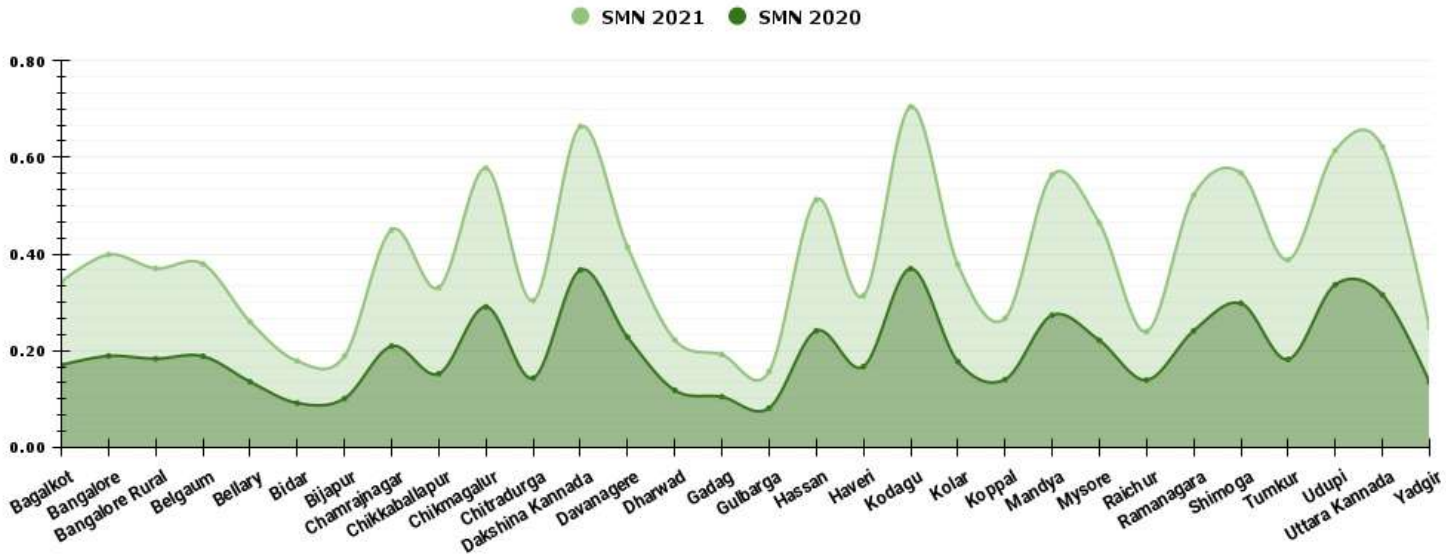
## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Smoothed Normalized Difference Vegetation Index (SMN)




## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Karnataka | Ballary | Rice | For control of gall midge in paddy, farmers are adviced to take up soil application of Carbofuron 3GR or Fipronil 0.3G @ 8 kg/acre or spray of Chlorpyriphos 20 EC @ 2 ml/lit or Carbosulfan 25 EC @ 2 ml/lt or Fipronil 5 SC @ 1 ml/lit or Thiamethoxam 25 WG @ 0.5 g/lit of water. Before taking up of plant protection measures, farmers are adviced to drain out water from paddy field. |
| | | Groundnut | The early sown crop is at physiological maturity go for harvesting of crops. After threshing it's better to sort out the damaged and infected pods/kernel inorder to avoid post-harvest infection. |
| Karnataka | Belagav,Dharwad | Green Gram/ Black Gram | Sowing of Green gram and Black gram May taken up where is favorable for sowing. |
| | | Soybean,Ground Nut | Sowing May be continued where moisture is favorable for sowing. |
| | | Cotton | Sowing of Cotton may be continued where moisture is favorable for sowing |
| Karnataka | Kodagu | Rice | Green manuring crops like Sunhemp and Dhiancha can be sown in paddy fields with the receipt of rainfall or apply 4-6 tons of FYM/acre. With the view of Normal monsoon select High yielding long duration variety like Tunga, Intan, KPR-1, KPR-2 and Hemavati. |
| Karnataka | Mandya | Rice | Suitable Varieties for sowing in the month of June. Paddy- Jaya, B.R-2655, I.R- 30864 (suitable for saline soil). |
| | | Maize | Suitable Varieties for sowing in the month of June. Maize – Hema, Nithyashree, N.A.C-6002, N.A.C-6004 |
| Karnataka | Tumkuru | Maize | Maize variety Hybrid-Hema, Hybrid-Nithyashree, Composite NAC 6004, Composite NAC 6002 is recommended for May-June month sowing. Before sowing seed treatment with 200 gm Azospirillium |
| | | Pigeon Pea (Red Gram/Arhar) | Redgram variety BRG 1 and BRG 2 is recommended for May-June monthsowing. Before sowing seed treatment with 200 gm Rhizobium. |
| Karnataka | Uttarakannada | Paddy | Paddy growing farmers should use the recommended variety for their area. For low land paddy Intan, Abhilash, Doddigya. For upland paddy Amrut or Prasanna variety can be used. · For drill sown area farmers should select good quality seeds and keep ready for sowing. Selected seeds should be treated with bavistin as seed treatment to avoid the seed borne diseases.(1gm /kg seeds). · Drill sowing of Paddy can be taken up. |
| | | Maize | Maize sowing can be taken up. · Farmers can select the hybrids like DMH-2,Arjun and other hybrids available in the market. · As a basal dose farmers should apply 30:75:30 kg of N:P:K fertilizers. Along with this farmers should also apply 25kg zinc sulphate at the time of sowing. · Sowing should be taken up with a spacing of 60X20 cm. |
| | | Cotton | Select these varieties DHH-11, NCH-145, NHH-44, DHB-105 and Sahana. · Use the Bt hybrids available in the market · Fertilizer dosage per hectare 30kg N (65 kg urea), 30 kg P (187 kg SSP), 30 kg K (50kg Potassium Sulphate), 25 kg Zinc Sulphate and 25 kg Ferrous sulphate. · Seed rate Hybrids – 2.5 to 3 kg/ha and varieties- 5 to 6 kg/ha · Cotton dibbling can be taken up. |

# RAJASTHAN

The cultivable area is 74.9%of total geographical area and the net sown area is 17.096 million hectare. The percentage of net irrigated sown area is 30.6%.

## Kharif Major Crops

The Kharif crops include bajra, pulses, jowar, maize and groundnut. The regions that are highly irrigated or receive abundant water supply are utilized for the cultivation of improved high-yielding varieties of rice. Some places of Rajasthan that has black soil nurture the growth of major cash crops like cotton.

## Agro-Climatic Zones of Rajasthan

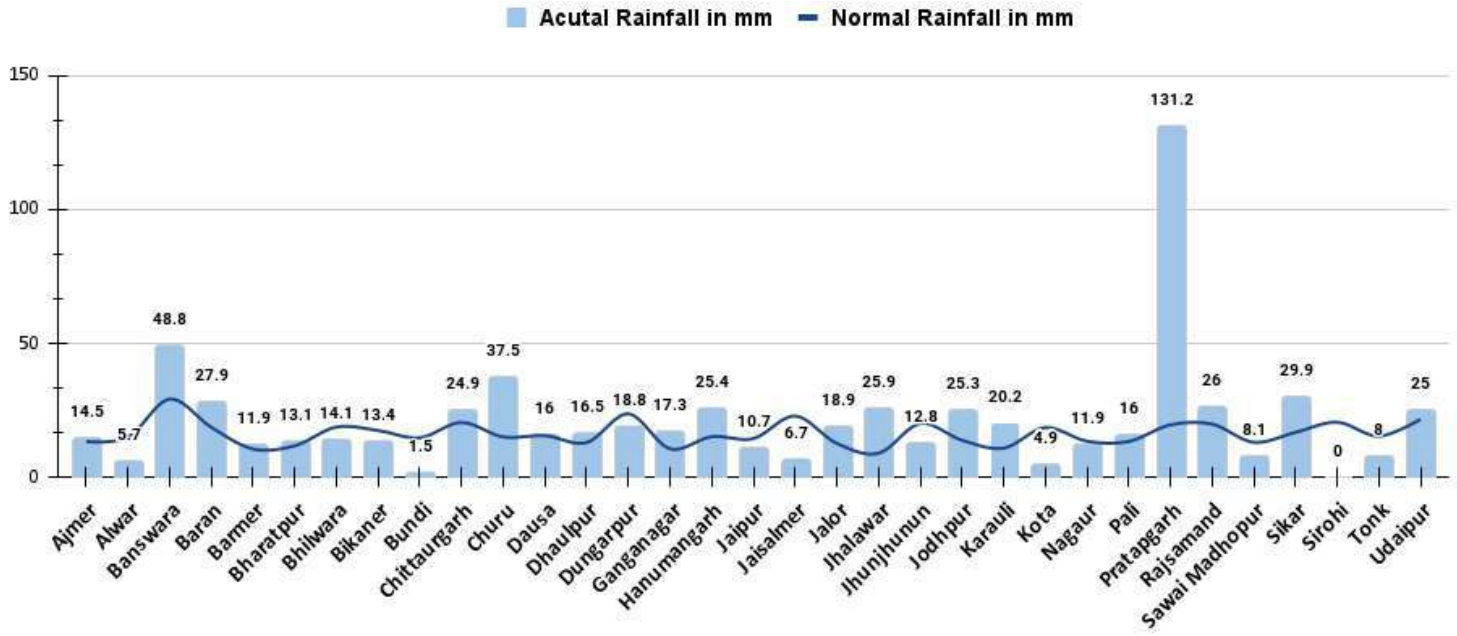
| Sr. No. | Agro-Climatic Regions | Districts |
|---|---|---|
| 1 | Arid western plain | Barmer & part of Jodhpur |
| 2 | Irrigated north western plain | Sri Ganganagar, Hanumangarh |
| 3 | Hyper arid partial irrigated zone | Bikaner, Jaisalmer, Churu |
| 4 | Internal drainage dry zone | Nagaur, Sikar, Jhunjhunu, Part of Churu |
| 5 | Transitional plain of Luni basin | Jalore, Pali, Part of Sirohi, Jodhpur |
| 6 | Semi-arid eastern plains | Jaipur, Ajmer, Dausa, Tonk |
| 7 | Flood prone eastern plain | Alwar, Dholpur, Bharatpur, Karauli, Sawai Madhopur |
| 8 | Sub-humid southern plains | Bhilwara, Udaipur, Chittorgarh, Rajsamand, Pratapgarh |
| 9 | Humid southern plains | Dungarpur, Udaipur, Banswara, Chittorgarh |
| 10 | Humid south eastern plain | Kota, Jhalawar, Bundi, Baran |

## Reservoir Storage Status

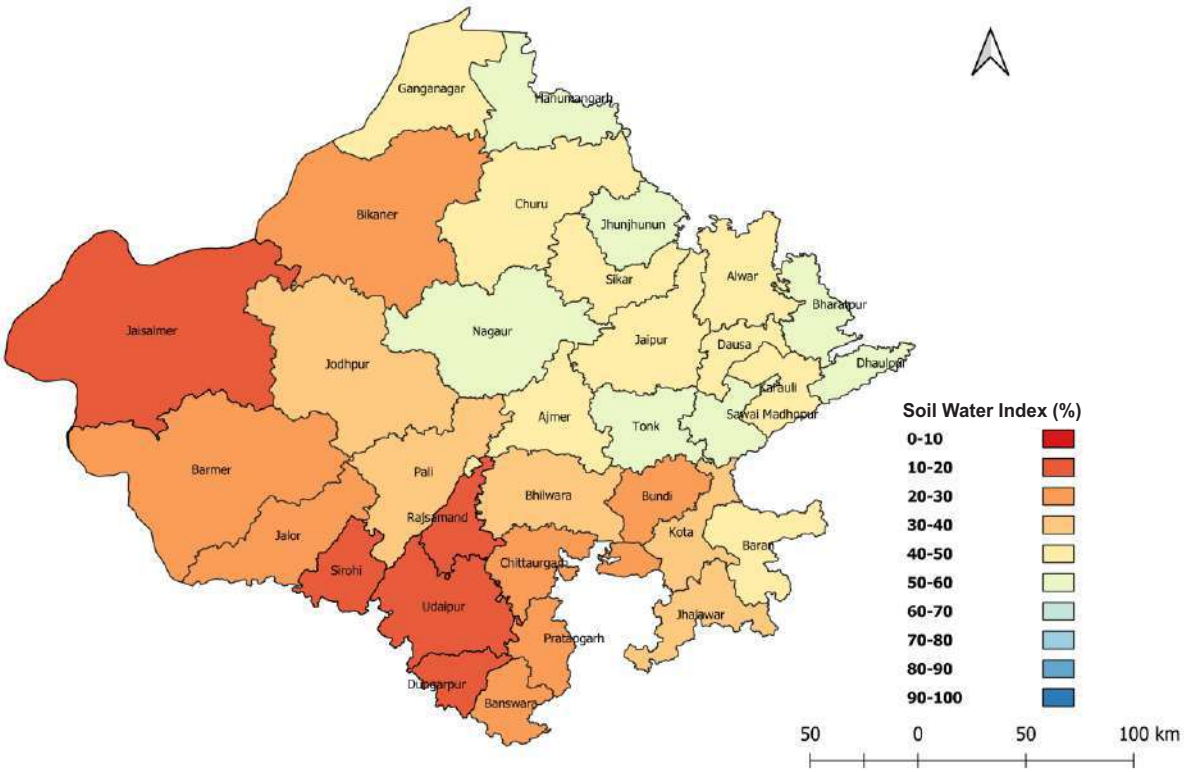
| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| MAHI BAJAJ SAGAR | 280.75 | 1.711 | 269.15 | 0.528 | 270.00 | 0.599 |
| JHAKAM | 359.5 | 0.132 | 344.75 | 0.029 | 346.35 | 0.036 |
| RANA PRATAP SAGAR | 352.81 | 1.436 | 348.30 | 0.623 | 348.27 | 0.618 |
| BISALPUR | 315.5 | 1.076 | 309.94 | 0.301 | 312.95 | 0.629 |

| LAST YEAR STORAGE AS % | % OF THIS YR STORAGE TO LAST |
|---|---|
| 35 | 88 |
| 27 | 81 |
| 43 | 101 |
| 58 | 48 |

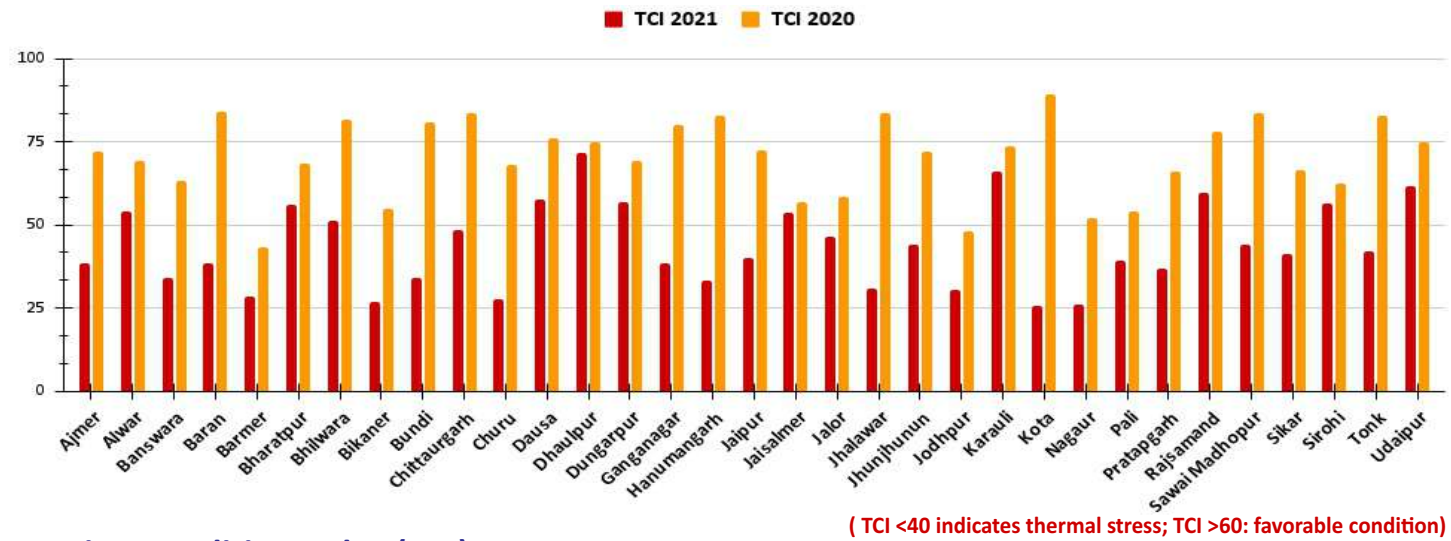
## Rainfall




## Soil Water Index

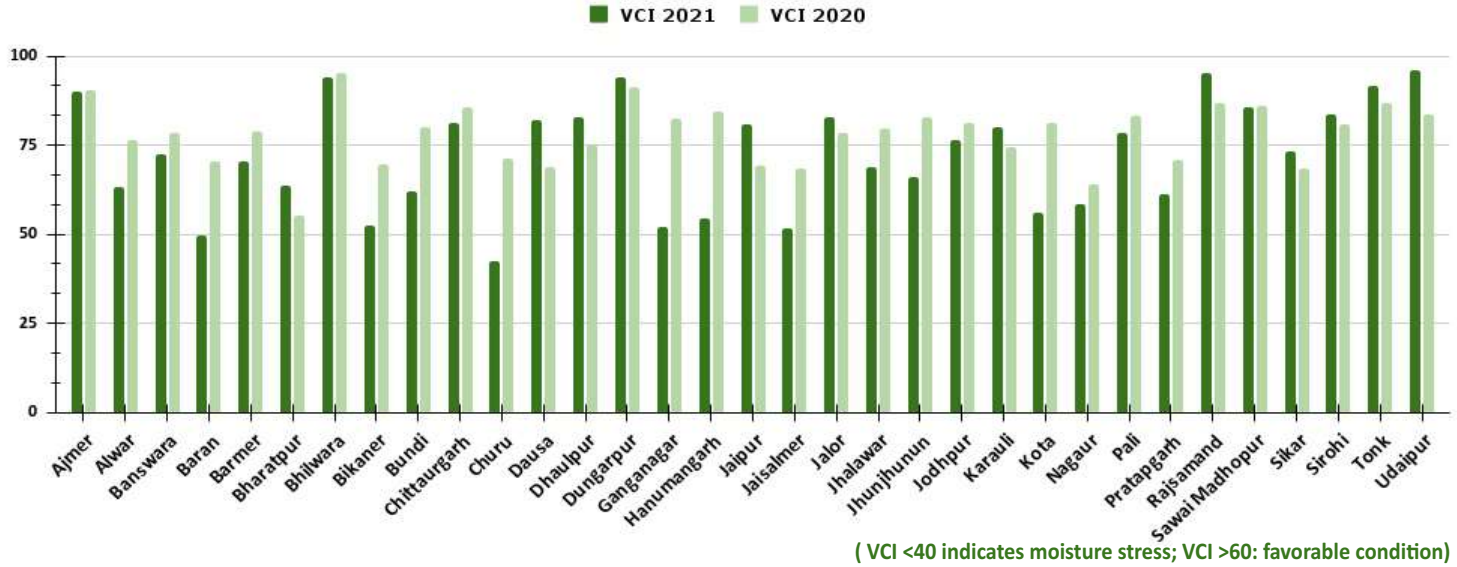


## Temperature Condition Index (TCI)



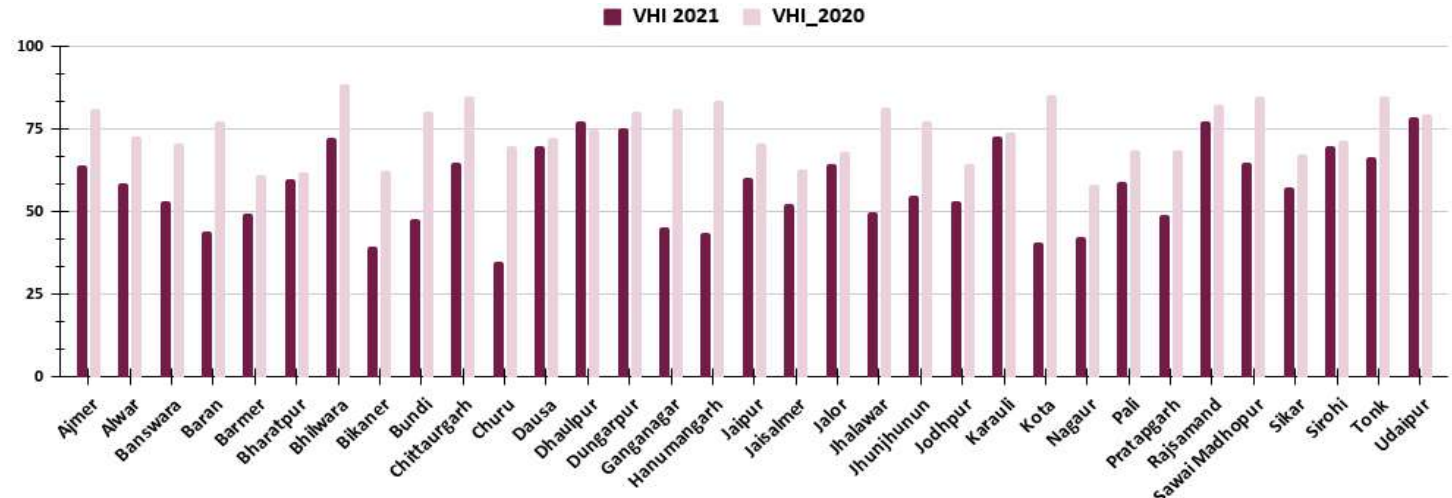

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Smoothed Normalized Difference Vegetation Index (SMN)


## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Rajasthan | Ajmer | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| | | Fodder Pearl Millet/ Sorghum | Farmers are advised to sown early fodder crops like millet and sorghum for the rainy season |
| | | Cotton | It is favorable time for cotton sowing so farmers are advised to sown the cotton |
| Rajasthan | Banswara | Maize | Sowing of kharif crops do at sufficient soil moisture |
| Rajasthan | Barmer | Pearl Millet | The optimum time for sowing of peal millet is start from mid of June. So, farmers are advised to arrange the fertilizers, chemical and improved varieties are MPMH-21, MPMH-17, GHB-905, MBC-2, HHB-67(improved), GHB-719, CZP-9802, GHB-744, RHB-177, HHB-197 and RHB-173. |
| | | Green Gram | The optimum time for sowing of green gram crop up to mid-July, so arrange fertilizers, chemical for seed treatment and certified seed IPM-02-3, MH-2-15, SML-668, RMG344, RMG-268, RMG-62, GM-4, K-851 |
| Rajasthan | Bhilwara | Maize | Improved varieties of maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2 and Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3 |
| | | Soybean | Improved varieties of soybean:- Pratap soya-1, Pratap Raj soya- 24, NRC-37 |
| | | Ground Nut | Improved varieties of groundnut:- Pratap groundnut-1, Pratap groundnut-2, JL-24, GG-1. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. At the time of sowing give SSP 375 kg and Urea 35 kg /ha behind the plough. |
| | | Sorghum | For the control of suit fly in sorghum, sowing of crop should be completed within the week after receiving of first monsoon rainfall. Improved varieties of sorghum:- CSV-15, CSV-17, Pratap sorghum-1430, CSV-23 Fodder purpose (Multicut):- MP charri, SSG-59-3 Single cut:- Rajasthan charri-1, Rajasthan charri-2, Pratap charri-1080 . |
| Rajasthan | Chitorgarh | Maize | Improved varieties of Maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2, Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3, Bio-9682, DHM-121 etc. |
| | | Soyabean | Improved varieties of Soybean:- Pratap Soya-1, Pratap Soya-45, Pratap Raj Soya- 24 (RKS-24), JS 20-34, JS 20-29 etc. |
| Rajasthan | Churu | Green Gram | The optimum time for sowing of green gram crop up to mid-July, so arrange fertilizers, chemical for seed treatment and certified seed IPM-02-3, MH-2-15, SML-668, RMG344, RMG-268, RMG-62, GM-4, K-851. |
| Rajasthan | Dausa | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed |
| | | Cotton | It is favorable time for cotton sowing so farmers are advised to sown the cotton. |
| Rajasthan | Dhaulpur | Green Gram | The leaves of plants affected by yellow mosaic disease are yellow and appear everywhere. All the leaves turn yellow when the excess is stopped. To control this, spray Imidacloprid 250 ML per hectare with 500 to 600 liters of water. To control white fly, spray imidacloprid 250 mL per hectare with 500 to 600 liters of water. |
| Rajasthan | Dungarpur | Maize | Improved varieties of Maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2, Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3, Bio-9682, DHM-121 etc. |
| | | Soyabean | Improved varieties of Soybean:- Pratap Soya-1, Pratap Soya-45, Pratap Raj Soya- 24 (RKS-24), JS 20-34, JS 20-29 etc. |

| | | | |
|---|---|---|---|
| Rajasthan | Hanumangarh | Groundnut | In sandy soils where there is a problem of weeds, use 175 gm of Pendimethalin (30 EC) after two days of sowing and again after 6 weeks of irrigation. If weedicide is not used at the time of sowing, then 30 to 35 days after sowing, spray Imazethapyr (10 percent SL) @ 10 grams of active ingredient per bigha in 100 to 125 leter of water for weed control. |
| | | Green Gram | Recommended varieties of moong are - MH-421, IPM02-3, Satya (MH 2-15), SML-668, K851, MUM2, Gangotri (Ganga-8) can be used for sowing. Use seed rate of 4 to 5 kg per bigha. Use 5 to 6 kg seed rate for SML-668. Keep the row-torow distance 30 cm. |
| | | Sesame | Sesame can be sown from the onset of rain till July, for sowing, use improved varieties- C 50 and RT-40. Use seed rate of 2.5 kg per hectare. Seed treatment Treat with thiram or Captan @ 3 gm per kg of seed. Use 10 kg Nitrogen, 25 kg Phosphorous at the time of sowing. |
| Rajasthan | Jaipur | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| Rajasthan | Jaisalmer | Cluster Bean/ Guar | The optimum time for cluster bean crop is onset of monsoon or mid-June to mid-July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment. Use 16 to 20 kg seed per hectare and also use certified seed of improved varieties as RGC-936, RGC-1033, RGC-1038 and RGC-1066. Treat the seeds with Trichoderma viride 1% WP @ 10 gram per kilogram seed before the sowing. |
| | | Groundnut | Use certified seed of improved varieties as HNG-10, TG37A etc and use seed @ 80 kg/ha. |
| Rajasthan | Jalore | Pearl Millet | The optimum time for kharif pearl millet is mid-June to third week of July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment and use 10 to 12 ton well prepared FYM in the field 2 or 3 weeks before sowing. Use 4 kg seed per hectare and also use certified seed of improved varieties as MPMH-17, HHB-67(Improved) and Raj 171. |
| | | Green Gram | The optimum time for green gram is mid-June to mid-July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment. Use 16 kg seed per hectare and also use certified seed of improved varieties as GM-4, GAM-5, GAM-6 and IPM-02-03. Treat the seeds with Trichoderma viride 1% WP @ 8 to 10 gram per kilogram seed before the sowing. |
| | | Cluster Bean/ Guar | The optimum time for cluster bean crop is onset of monsoon or mid-June to mid-July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment. Use 16 to 20 kg seed per hectare and also use certified seed of improved varieties as RGC-936, RGC-1033, RGC-1038 and RGC-1066. Treat the seeds with Trichoderma viride 1% WP @ 10 gram per kilogram seed before the sowing. |
| Rajasthan | Jhunjhunu | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| Rajasthan | Jodhpur | Pearl Millet | The optimum time for sowing of peal millet is start from mid of June. So, farmers are advised to arrange the fertilizers, chemical and improved varieties are MPMH-21, MPMH-17, GHB-905, MBC-2, HHB-67(improved), GHB-719, CZP-9802, GHB-744, RHB-177, HHB-197 and RHB-173. |
| | | Green Gram | The optimum time for sowing of green gram crop up to mid-July, so arrange fertilizers, chemical for seed treatment and certified seed IPM-02-3, MH-2-15, SML-668, RMG344, RMG-268, RMG-62, GM-4, K-851 |
| Rajasthan | Nagaur | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| Rajasthan | Pali | Sorghum (Jowar/Great Millet) | The appropriate time for sowing of sorghum, maize and peal millet has been start. So, farmers are advice to arrange the seeds of recommended hybrids or improved varieties, fertilizers and seed treatments inputs and sowing should be done when sufficient amount of rainfall received. |
| | | Green Gram | The optimum sowing time for mungbean has been start. So, farmers are advised to arrange the seeds of improved varieties (GM-4, RMG-492, IPM-02-3, GAM-5 and MH-421), fertilizers and seed treatments inputs and sowing should be done after sufficient rainfall received. Seed should be treating with Rhizobium and Trichoderma viride 1% WP @ 10 gm per kg seed. |
| | | Cluster Bean/ Guar | The optimum sowing time for guar has been start, so farmers are advised to use certified seed of recommended varieties viz- RGC-1033, RGC-1031, RGC-936 and HG-2-20. Seed should be treat with Trichoderma viride 1% WP @ 10 gm, imidachloprid 600 FS @ 6-7ml per kg seed and Rhizobium and. Sowing should be done when ample amount of rain received. |
| Rajasthan | Pratapgarh | Maize | Improved varieties of maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2 and Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3 |
| | | Soybean | Improved varieties of soybean:- Pratap soya-1, Pratap Raj soya- 24, NRC-37 |
| | | Ground Nut | Improved varieties of groundnut:- Pratap groundnut-1, Pratap groundnut-2, JL-24, GG-1. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. At the time of sowing give SSP 375 kg and Urea 35 kg /ha behind the plough. |
| | | Sorghum | For the control of suit fly in sorghum, sowing of crop should be completed within the week after receiving of first monsoon rainfall. Improved varieties of sorghum:- CSV-15, CSV-17, Pratap sorghum-1430, CSV-23 Fodder purpose (Multicut):- MP charri, SSG-59-3 Single cut:- Rajasthan charri-1, Rajasthan charri-2, Pratap charri-1080 . |

| | | | |
|---|---|---|---|
| Rajasthan | Rajsamand | Maize | Improved varieties of maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2 and Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3 |
| | | Soybean | Improved varieties of soybean:- Pratap soya-1, Pratap Raj soya- 24, NRC-37 |
| | | Ground Nut | Improved varieties of groundnut:- Pratap groundnut-1, Pratap groundnut-2, JL-24, GG-1. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. At the time of sowing give SSP 375 kg and Urea 35 kg /ha behind the plough. |
| | | Sorghum | For the control of suit fly in sorghum, sowing of crop should be completed within the week after receiving of first monsoon rainfall. Improved varieties of sorghum:- CSV-15, CSV-17, Pratap sorghum-1430, CSV-23 Fodder purpose (Multicut):- MP charri, SSG-59-3 Single cut:- Rajasthan charri-1, Rajasthan charri-2, Pratap charri-1080 . |
| Rajasthan | Sikar | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| Rajasthan | Sirohi | Green Gram | The optimum time for green gram is mid-June to mid-July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment. |
| | | Cluster Bean/ Guar | The optimum time for cluster bean crop is onset of monsoon or mid-June to mid-July, Therefore, farmers are advised to arrange certified seed, fertilizers and chemical for seed treatment. improved varieties as RGC-936, RGC-1033, RGC-1038 and RGC1066. Treat the seeds with Trichoderma viride 1% WP @ 10 gram per kilogram seed before the sowing. |
| | | Pearl Millet | The zaid pearl millet crop is still at maturity stage so farmers are advised to harvest the crop and store in safe place. |
| Rajasthan | Ganganagar | Cotton | Farmers are advised to visit cotton fields regularly to check the apperance of white fly if white fly population reach above economic threshhold level (8-12 white fly/leaf), Spray neem based (Nimbosidin 5 ml + liquid soap 1 ml per litre water) pesticides. |
| | | Cluster Bean/ Guar | Use certified seed of recommended varieties- RGC-936, RGC-986, RGC-1002, HG365 and HG-2-20 with seed rate of 3-4 kg/bigha. Recommended row to row spacing for sowing guar is 30 cm. Apply 10-11 kg urea and 62.5 kg SSP as basal per bigha. Use half of phosphorus dose in rainfed areas. |
| Rajasthan | Tonk | Groundnut | First fortnight of the June month is appropriate time for sowing of groundnut. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. To control White grub, treat groundnut seeds with Clothianidin 50 W.D.G. @ 2 g or imidacloprid 17.8 SL @ 3.0 ml per kg seed. |
| | | Cotton | It is favorable time for cotton sowing so farmers are advised to sown the cotton. |
| Rajasthan | Udaipur | Maize | Improved varieties of maize:- Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2 and Pratap hybrid maize-1,Pratap Makka-9, Pratap hybrid Makka-3 |
| | | Soybean | Improved varieties of soybean:- Pratap soya-1, Pratap Raj soya- 24, NRC-37 |
| | | Ground Nut | Improved varieties of groundnut:- Pratap groundnut-1, Pratap groundnut-2, JL-24, GG-1. On the basis of soil testing farmers are advised to mix 250 kg gypsum per hector before final ploughing. At the time of sowing give SSP 375 kg and Urea 35 kg /ha behind the plough. |
| | | Sorghum | For the control of suit fly in sorghum, sowing of crop should be completed within the week after receiving of first monsoon rainfall. Improved varieties of sorghum:- CSV-15, CSV-17, Pratap sorghum-1430, CSV-23 Fodder purpose (Multicut):- MP charri, SSG-59-3 Single cut:- Rajasthan charri-1, Rajasthan charri-2, Pratap charri-1080 . |

# MAHARASHTRA

Out of total cultivable land in Maharashtra about 60% land is under food grain crop.

## Kharif Major Crops

Major crops in the state are Paddy, Wheat, Gram, Lentil, Nagali, Jowar, Niger, Groundnut, Bajra, Urad, Soyabean and Cotton.

## Agro-Climatic Zones of Maharashtra

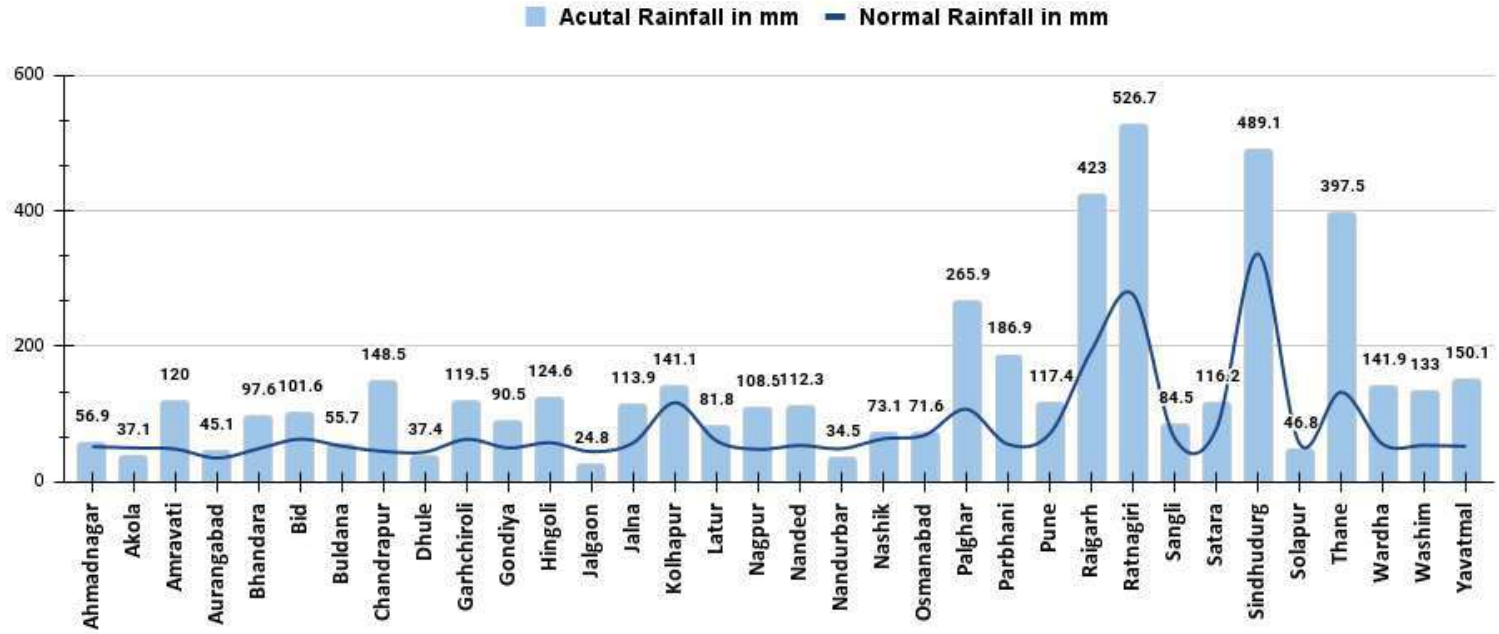
| Sr.No. | Agro-Climatic Regions | Districts |
|---|---|---|
| 1 | South Konkan | Ratnagiri, Sindhudurg |
| 2 | North Konkan | Thane, Raigad |
| 3 | Western Ghat zone | Kolhapur, Satara, Pune, Ahmednagar, Nasik, Sindhudurg |
| 4 | Sub. Montane zone | Nasik, Pune, Satara, Sangli, Kolhapur |
| 5 | Western Maharashtra plain zone | Dhule, Ahmednagar, Sangli, Nasik, Pune, Satara, Kolhapur |
| 6 | Western Maharashtra scarcity zone | Nasik, Pune, Satara, Kolhapur |
| 7 | Central Maharashtra plateau zone | Aurangabad, Jalna, Beed, Osmanabad, Parbhani, Nanded, Buldana, Akola, Amravati, Jalgaon, Dhule, Solapur |
| 8 | Central Vidarbha zone | Wardha, Nagpur, Yavatmal, Chandrapur, Aurangabad, Jalna, Parbhani, Nanded, |
| 9 | Eastern Vidarbha zone | Bhandara, Gadchiroli, Chandrapur, Nagpur, Gondia |

## Reservoir Storage Status

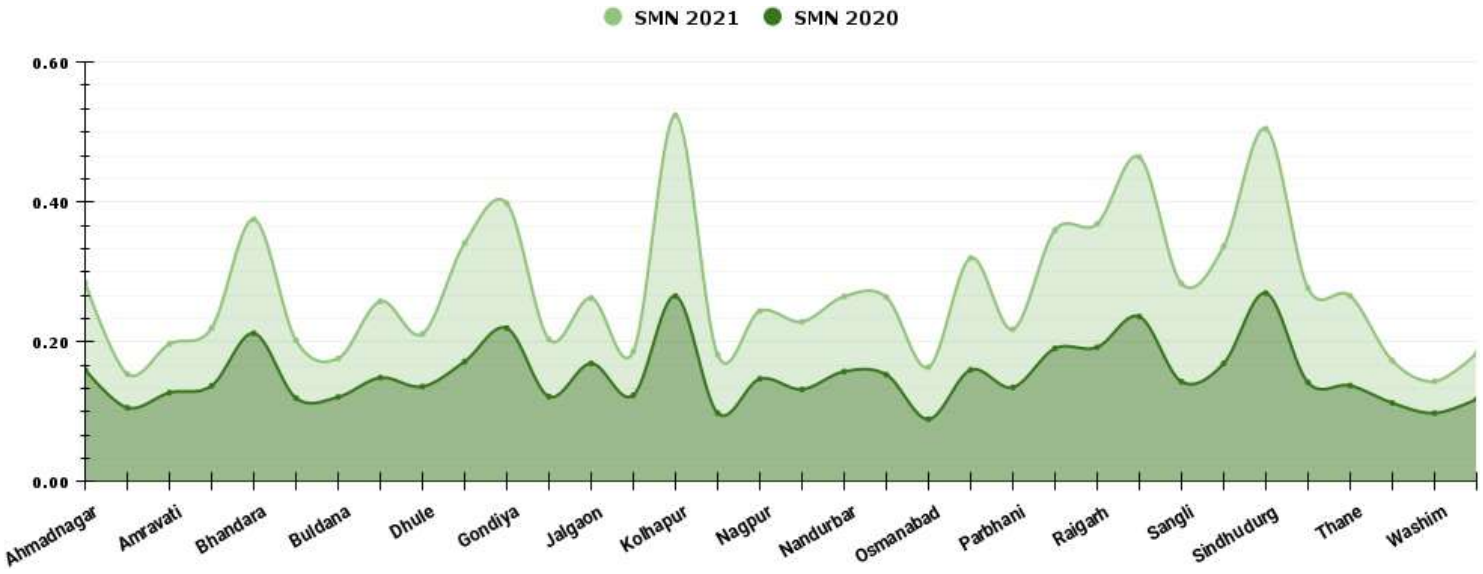
| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| JAYAKWADI(PAITHAN) | 463.91 | 2.171 | 459.33 | 0.729 | 459.63 | 0.803 |
| KOYANA | 657.9 | 2.652 | 633.88 | 0.752 | 634.59 | 0.789 |
| BHIMA(UJJANI) | 496.83 | 1.517 | 489.63 | 0.000 | 489.14 | 0.000 |
| ISAPUR | 441 | 0.965 | 434.87 | 0.441 | 433.41 | 0.349 |
| MULA | 552.3 | 0.609 | 539.22 | 0.107 | 537.30 | 0.063 |
| YELDARI | 461.77 | 0.809 | 457.75 | 0.445 | 458.26 | 0.484 |
| GIRNA | 398.07 | 0.524 | 389.10 | 0.170 | 389.42 | 0.179 |
| KHADAKVASLA | 582.47 | 0.056 | 580.31 | 0.029 | 580.67 | 0.033 |
| UPPER VAITARNA | 603.5 | 0.331 | 593.34 | 0.066 | 594.89 | 0.089 |
| UPPER TAPI | 214 | 0.255 | 209.70 | 0.052 | 209.70 | 0.052 |
| PENCH(TOTLADOH) | 490 | 1.091 | 484.23 | 0.625 | 486.43 | 0.760 |
| UPPER WARDHA | 342.5 | 0.564 | 338.34 | 0.253 | 338.86 | 0.285 |
| BHATSA | 142.07 | 0.942 | 110.68 | 0.302 | 111.08 | 0.307 |
| DHOM | 747.7 | 0.331 | 734.55 | 0.090 | 735.55 | 0.105 |
| DUDHGANGA | 646 | 0.664 | 627.55 | 0.192 | 626.71 | 0.178 |
| MANIKDOH | 711.25 | 0.288 | 686.57 | 0.014 | 687.00 | 0.016 |
| BHANDARDARA | 744.91 | 0.304 | 732.84 | 0.140 | 726.30 | 0.089 |
| URMODI | 696 | 0.273 | 687.96 | 0.158 | 687.58 | 0.153 |
| BHATGHAR | 623.28 | 0.673 | 597.83 | 0.047 | 605.72 | 0.176 |
| NIRA DEOGHAR | 667.1 | 0.332 | 633.70 | 0.020 | 640.00 | 0.057 |
| THOKARWADI | 667.14 | 0.353 | 652.58 | 0.065 | 657.09 | 0.128 |
| KANHER | 690.78 | 0.272 | 672.97 | 0.051 | 672.44 | 0.047 |
| MULSHI | 607.1 | 0.572 | 591.21 | 0.027 | 591.80 | 0.042 |
| SURYA | 118.6 | 0.276 | 101.55 | 0.070 | 103.95 | 0.091 |
| TILLARI | 113.2 | 0.447 | 100.25 | 0.261 | 97.80 | 0.231 |

| LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|
| 37 | 91 |
| 30 | 95 |
| 0 | 0 |
| 36 | 126 |
| 10 | 170 |
| 60 | 92 |
| 34 | 95 |
| 59 | 88 |
| 27 | 74 |
| 20 | 100 |
| 70 | 82 |
| 51 | 89 |
| 33 | 98 |
| 32 | 86 |
| 27 | 108 |
| 6 | 88 |
| 29 | 157 |
| 56 | 103 |
| 26 | 27 |
| 17 | 35 |
| 36 | 51 |
| 17 | 109 |
| 7 | 64 |
| 33 | 77 |
| 52 | 113 |

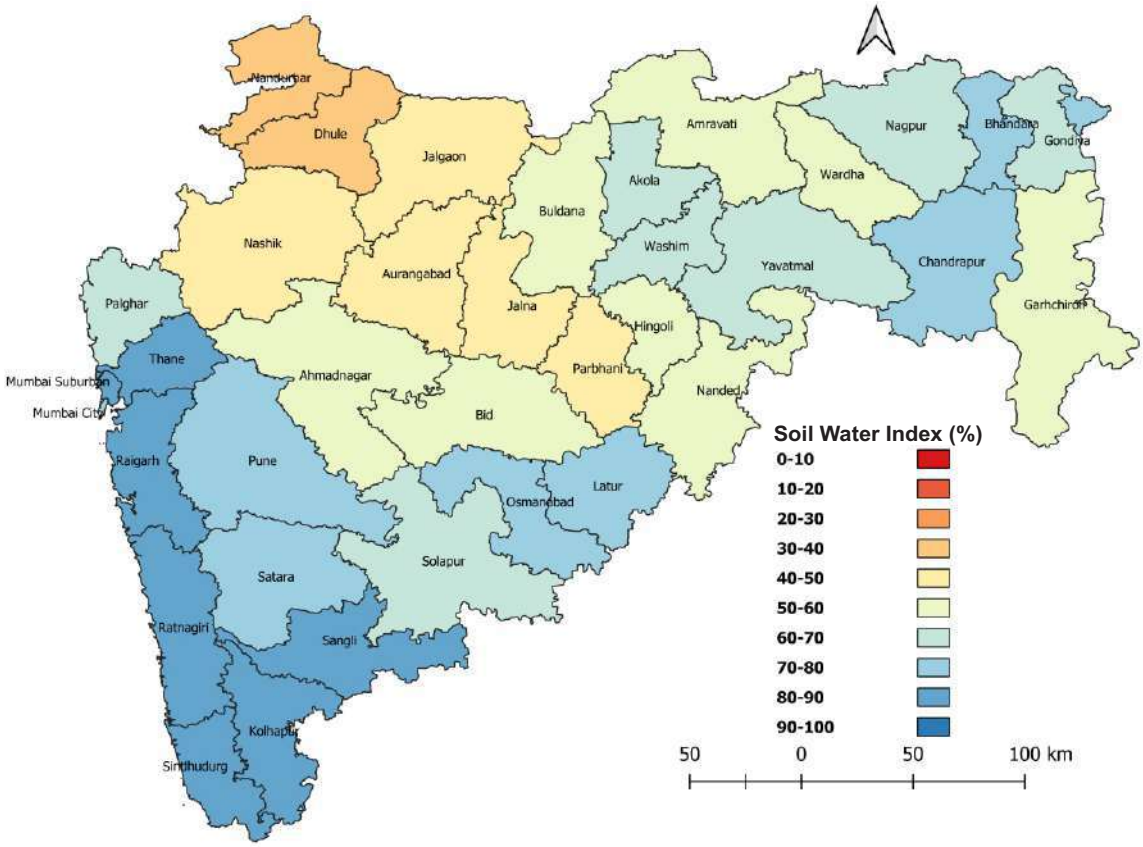
## Rainfall



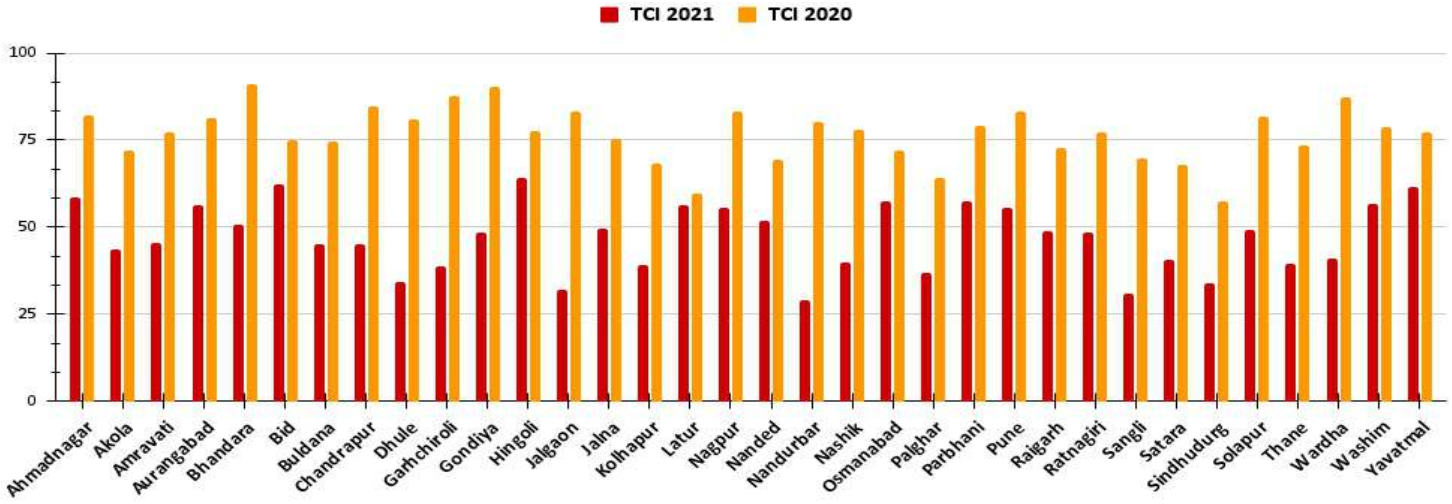
## Smoothed Normalized Difference Vegetation Index (SMN)




## Soil Water Index

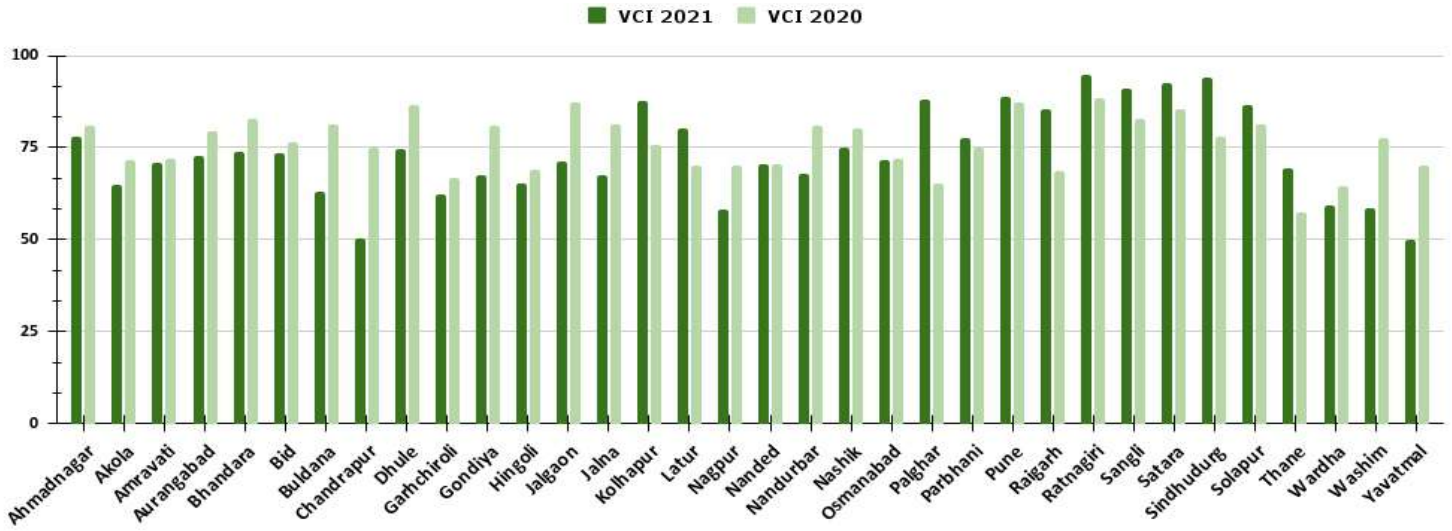


## Temperature Condition Index (TCI)



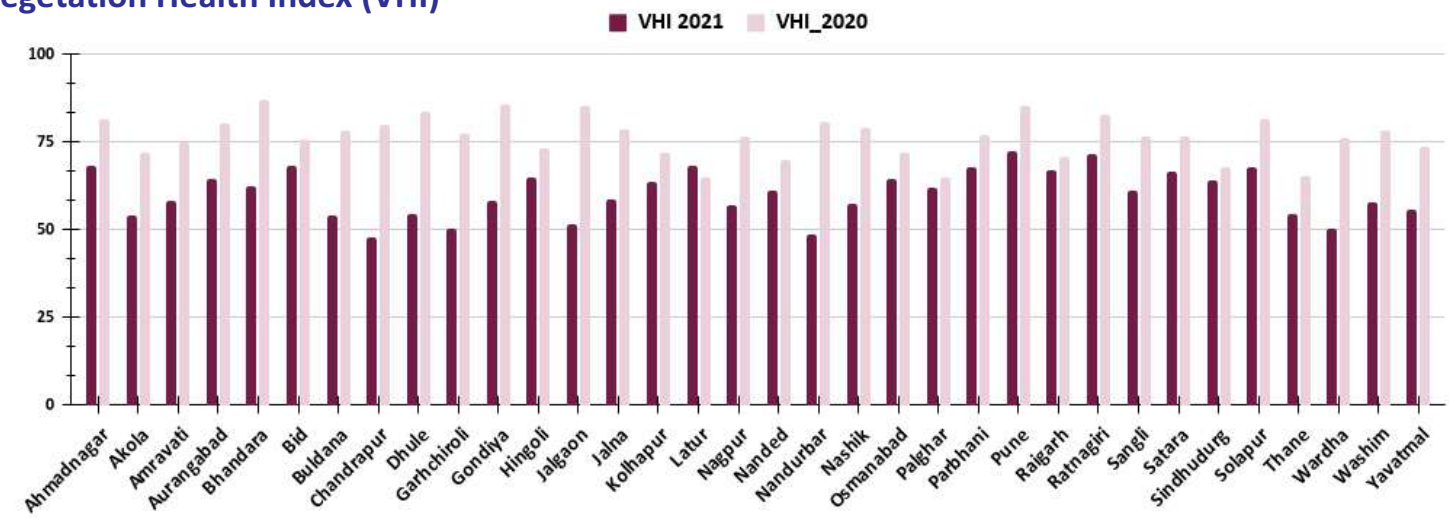

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

# Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Maharashtra | Ahmednagar | Groundnut | Selection of Variety: SB-11, JL-24 (Phule Pragati), TAG-24, JL-220 (Phule Vyas), JL-286 (Phule Unap), TPG-41, TG-26, JL-501, Phule RHRG-6021, Phule Unnati, JL-776 (Phule Bharti) Sowing time: 15th June to 15th July |
| | | | Seed Treatment: To protect the crop from seed borne, apply 5 g of Thirum or 2 g of Carbendazim or 3 g of Mancozeb or 5 g of Trichoderma per kg of seeds. Then apply 25 g of Rhizobium and 25 g of PSB per kg of seed. Dry the treated seeds in the shade before sowing |
| | | | Fertilizer dose: Apply 25 kg N + 50 kg P2O5 at sowing time. Fertilizer Management (as per revised recommendation 2013) For maximum production of groundnut, 400 kg/ ha of gypsum should be mixed in the soil along with chemical fertilizer doses (200 kg/ ha at the time of sowing and the remaining 200 kg/ ha at the time of peg formation). |
| | | Maize | Seed treatment: Apply 2 to 2.5 g of Thirum/ kg seed before sowing. Also use Azotobacter before sowing. |
| | | | Fertilizer dose: 40 kg N, 60 kg P2O5, 40 kg K2O per hectare at the time of sowing, 40 kg N 30 days after sowing, 40 kg N per hectare 40-45 days after sowing. Micronutrients: In case of zinc deficiency in the soil, apply 20 to 25 kg zinc sulphate per hectare. |
| | | Bajara | Selection of Variety: A) Hybrid: Phule Adishakti, Phule Mahashakti, B) Improved: Dhanashakti |
| | | | Seed Treatment: A) Seed treatment with 20% salt solution: If certified seeds are not available, seeds should be treated with 20% salt solution before sowing. For this, dissolve 2 kg of salt in 10 liters of water. Light and fungus infected seeds floating on water should be removed and destroyed. Healthy and heavy seeds at the bottom should be separated, washed with water 2 to 3 times, then dried in shade and used for sowing. B) Metalaxyl 35 WS Seed treatment: Before sowing, apply 6 g of Metalaxyl 35 WS (apron) per kg of seed and then sow. C) Seed treatment of Azospirillum and PSB: 25 g of Azospirillum per kg of seed should be given and sown. This saves 20 to 25 per cent nitrogen fertilizer and increases production by 10 per cent. Also PSB 25 gm per kg of seed. |
| | | | Fertilizer dose: 40 kg N, 20 kg P2O5 and 20 kg K2O in light soil and 50 kg N, 25 kg P2O5 and 25 kg K2O per hectare in medium soil. At the time of sowing give half |
| | | Green Gram & Black Gram | Selection of Varieties: There are many varieties available in green gram. Vaibhav is suitable for kharif seasons. Vaibhav and BPMR-145 are the two varieties which are disease resistant and high yielding. Both are resistant to powder mildew disease. |
| | | | Black gram: TPU-4 and TAU-1 |
| | | | Seed treatment: Before sowing, apply 5 g of Trichoderma per kg of seed and then mix 25 g of Rhizobium bacterium powder in cold jaggery water. Trichoderma controls fungal diseases. Rhizobium increases the availability of nitrogen by growing nodules on the roots. |
| | | | Fertilizer Dose: Apply 20 kg N and 40 kg P2O5 or 100 kg DAP per hectare to these two crops. Preferably chemical fertilizers should be mixed with well decomposed manure and apply near the seeds to improve the effect. |
| Maharashtra | Akola | Soybean | Avoid sowing under insufficient soil moisture condition, wait till receipt of sufficient monsoon rains. • For use of own seeds for crop like soybean to test seed viability conduct a simple germination test well in advance. • Ensure the availability of biofertilizers for seed treatment before sowing (Rhizobium + PSB @25 gm and Tricoderma + Thiram @ 4 gm per kg seed). |
| | | Cotton | Avoid sowing under insufficient soil moisture condition, wait till receipt of sufficient monsoon rains • Crop rotation to be followed in cotton fields that were heavily infested with pink bollworm during last season to break the life cycle of pink bollworm. • In kharif planning for cotton crop recommended deshi varieties include AKA-5, AKA-7 and AKA-8 with seed rate of 12 to 15kg/ha and spacing of 60 x 15 cm. American improved varieties include AKH-081 (60x15cm with seed rate 15 to 20 kg/ha), AKH-09-5 (Suvarna Shubhra), PKV Rajat and AKH 8828 (60x30cm with seed rate 10 to 12 kg/ha). Cotton deshi hybrid PKVDH-1, PKV-Suvarna 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. |
| | | Pigeon pea | Avoid sowing under insufficient soil moisture condition, wait till receipt of sufficient monsoon rains • 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). • Ensure the availability of biofertilizers for seed treatment before sowing (Rhizobium + PSB @25 gm and Tricoderma + Thiram @ 4 gm per kg seed). |
| | | Green gram / Black gram | Avoid sowing under insufficient soil moisture condition, wait till receipt of sufficient monsoon rains • Recommended green gram varieties are PKV- green gold, PKV mug-8802, PKV-AKM-4 and for black gram PKV udid-15, TAU-1, TAU-2 and PDKV black gold (AKU-10-1). • Ensure the availability of biofertilizers for seed treatment before sowing (Rhizobium + PSB @25 gm and Tricoderma + Thiram @ 4 gm per kg seed). |
| Maharashtra | Amravati | Soyabean | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. The spacing between two rows and two plants should be 30 X 8 or 45 X 5 cm and sowing should be done horizontally and east to west direction. • For sowing J.S.-335, J.S.-9305, M.A.U.S. -71, M.A.U.S. -158, M.A.U.S. -162, J.S.-20-29, J.S.-20-34, A.M.S.-1001 (PDKV Yellow Gold), AMS-MB-5-18 are recommended variety should be used. • Seed should be treated with Rhizobium and PSB @ 25gm/kg of seed and Trichoderma @ 5g/kg of seed prior to sowing. It will helps in nitrogen fixation, phosphorus availability and prevention from infestation of soil borne diseases. Farmers should use 75 to 80 kg/ha seed for drilling method, whereas for dibbling it should be 45 to 50 kg/ha. |
| | | Groundnut | Sowing of cotton crop is advised to be done after receiving adequate amount of rainfall ( 75 -100 mm ) • Seed should be treated with trichoderma viridi 4 gm/ Kg or Carboxyn 37.5 % + Thirum @ 3g/kg of seed, prior to sowing is advisable. Before sowing Groundnut seed should be treated with Rhizobium + PSB 250 gm/ 10-15 kg of seed . • For sowing TAG-24, JL-24, AK-159, AK-265, AK-303 PDKV G-335 are recommended variety should be used. |
| | | Cotton | Sowing of cotton crop is advised to be done after receiving adequate amount of rainfall ( 75 -100 mm ) . Seed should be treated with Carboxyn @ 1 g/kg of seed or Thirum @ 3g/kg of seed, prior to sowing is advisable. • Follow recommended spacing and fertilizer doses for arboretum cotton (60x15, 60x30cm, 40:20:20 Kg NPK/ha), Improved hirsutism (60x30cm, 60:30:30 Kg NPK/ha) and rainfed Bt hybrid cotton (90x45, 90x60, 60:30:30 Kg NPK/ha) and irrigated Bt Cotton (120x30, 120x60 cm, 120:60:60 Kg NPK/ha). • Intercroppping system viz., Cotton + Green gram (1:2) or Cotton + Black gram (1:1) or Cotton + soybean (1:1) or Cotton + Pigeon pea (6:1 or 8-10:2) should be adopted for sustainable production. Post emergence weedicide Pyrithioback Sodium @ 62.5 g a.i. /ha + Quizolfopethyl 50 g a.i. / ha should be sprayed as tank mix at 20-30 DAS (2-4 weed leaf stage). |
| | | Pigeon Pea (Red Gram/Arhar), | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. • For cultivation of Pigeon pea crop varieties to be chosen as per the soil type are-early varieties for medium soil type ( TAT-10,IPCL 87,AKT-8811), medium duration varieties for medium to heavy soil type (BSMR-736, PKV Tara, BSMR-853, BDN-716, BDN708) and long duration varieties for heavy soil type(IPCL-87119,C-11) seed rate 12 to 15 kg/ha. • Before sowing Pigeon pea seed should be treated with Rhizobium + PSB + trichoderma @ 25+25+4 gm/kg. |
| | | Black Gram | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. For cultivation of black gram PKV-udid-15,TAU-1,TAU-2 and PDKV black gold (AKU-10-1). Before sowing black gram seed should be treated with Rhizobium + PSB + trichoderma @ 25+25+4 gm/kg. |

| | | | |
|---|---|---|---|
| Maharashtra | Aurangabad | Cotton | Before sowing of Cotton crop seed treatment of Thiram or Captone @ 30 gm after that seed treatment with Azatobacter and PSB @ 100 ml per 10 kg seed is needed. Before sowing or at the time of sowing, application basal dose of fertilizer 60% Nitrogen and total Phosphorus and Potash for rainfed Cotton and 40 % Nitrogen, Total Phosphorus and Potash for irrigated Cotton |
| | | Maize | Before sowing of Maize crop seed treatment with Cyantraniliprole + Thiomethoxam 19.80 % @ 4 ml per Kg of seed is needed due to that the management of Fall Armyworm is carried out. After that seed treatment with Azatobacter and PSB @ 100 ml per 10 kg seed is needed. At the time of sowing, application basal dose of fertilizer 75 Kg Nitrogen, 75 Kg Phosphorus and 75 Kg Potash. |
| | | Pigeon Pea | Before sowing of Pigeon Pea seed treatment of Bavistin 1.5 to 2.0 gm or Thiram @ 2.5 gm per kg seed & after that seed treatment with Rhizobium and PSB @ 100 ml per 10 kg seed is needed. In addition, Trichoderma should be applied @ 3-5 gm per kg of seed to control the wilting. At the time of sowing Apply 25 kg N, 50 kg P at the time of sowing for vigorous growth of Pigeon pea crop. |
| | | Green Gram/Black Gram | Before sowing of Green Gram/Black Gram seed treatment of Carbendazim @ 1 gm or Thiram 2 gm as well as Trichoderma 4 g per kg seed & after that seed treatment with Rhizobium and PSB @ 100 ml per 10 kg seed is needed. At the time of sowing apply 25 kg N, 50 kg P at the time of sowing for vigorous growth of crop. |
| Maharashtra | Beed | Soybean | Apply 30:60:30 kg NPK / ha at the time of sowing of soybean crop. If phosphorus is not applied to SSP then add sulfur @ 20 kg per /ha. Sowing of soybean can be done up to 15th July. |
| | | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| Maharashtra | Buldhana | Black Gram | Farmers should consider moisture status and amount of receipt of monsoon rain (75- 100 mm) for sowing of black gram/green gram crop. Before sowing seed should be treated with Trichoderma @ 4g/kg of seed as preventive measure against root rot disease. Farmers can initiate the sowing of black gram/green gram crop. Before sowing seed should be treated with Trichoderma @ 4g/kg of seed as preventive measure against root rot disease |
| | | Cotton | Sowing of cotton crop is advised to be done after receipt adequate amount of rainfall ( 75 -100 mm ) . Seed should be treated with Carboxyn @ 1 g/kg of seed or Thirum @ 3g/kg of seed, prior to sowing is advisable.Sowing of rainfed Bt cotton should be done after receipt adequate rainfall. Rainfed cotton should be sown with spacing 90 x 45 cm. Basal dose of fertilizers @ 30:30:30 NPK kg/ha should be applied at the time of sowing of rainfed cotton. |
| | | Maize | Farmers can initiate the sowing of maize crop by judging sufficient moisture status and amount of rainfall ( 75 -100 mm ) received. Farmers are advised to treat the seed with Thirum + Carbondenzim @ 2 + 1g/kg of seed , Azatobacter, PSB 25g/kg of seed and Trichoderma 4g/kg of seed prior to sowing. |
| | | Pigeon Pea (Red Gram/Arhar) | After receipt of sufficient rain ( 75 – 100 mm ) farmers should go for sowing of pigeonpea crop. Seed should treated with Rhizobium and PSB @ 25 g/kg of seed and Trichoderma @ 4g/kg of seed for nitrogen fixation, phosphorus availability and prevention from soil borne diseases. Many places of the district have been received adequate amount of rainfall till date. Therefore, farmers should go for sowing of pigeonpea crop. Seed should treated with Rhizobium and PSB @ 25 g/kg of seed and Trichoderma @ 4g/kg of seed for nitrogen fixation, phosphorus availability and prevention from soil borne diseases. |
| | | Soyabean | Ensure about sufficient soil moisture in the field & amount of rainfall received ( 75 -100 mm ) for sowing of soybean crop. Seed should be treated with Rhizobium and PSB @ 25gm/kg of seed and Trichoderma @ 5g/kg of seed prior to sowing. It will helps in nitrogen fixation, phosphorus availability and prevention from infestation of soil borne diseases. Farmers should use 75 to 80 kg/ha seed for drilling method, whereas for dibbling it should be 45 to 50 kg/ha. |
| Maharashtra | Chandrapur | Pigeon Pea ( Red Gram) | Field preparation for sowing of pigeon pea may be done in this week. |
| | | | Farmers are advised to procure good quality seeds from certified source. Select disease and pest resistant variety for sowing like ICPL-87, AKT-8811, PKV-Tara, BSMR-853, BSMR-736, ICPL-88119 Aasha). |
| | | | Before sowing pigeon-pea seeds should be treated with crop specific Rhizobium culture and Phosphate Solubilizing Bacteria. This treatment increases the crop production. |
| | | | Carryout germination test of the available seed which should be minimum 70% in order to have optimum plant population. |
| | | Cotton | Sowing should be done (15th to 30th June) considering local soil moisture status and rainfall received. Minimum 75mm to 100mm rainfall should be received to start the sowing of crop. |
| | | | Delinted seed is preferred. Before sowing of cotton seed should be treated with Thiram/Captan @ 3g/Kg for control fungal disease. |
| | | | 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 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 |
| | | Soyabean | Sowing should be done (03rd week of June to 02ndweek of July) considering local soil moisture status and Minimum 75mm to 100mm rainfall received. |
| | | | Sowing should be done in lines 30cm - 45cm apart with the help of seed driller. Plant to Plant distance can kept from 5cm to 8cm. The sowing depth of soybean seed should not be more than 3 – 4 cm under ideal moisture condition. |
| | | | To reduce the fungal attack of soybean crop seed should be treated prior to sowing with fungicide Thiram/Bavistin @ 3 g/kg seed. After this treatment seed should be treated with Rhizobium and PSB @ 250gm per 10kg of seed. After seed treatments seed must be dried in shade and thereafter use it for sowing. |
| Maharashtra | Dhule | Groundnut | Selection of Variety: SB-11, JL-24 (Phule Pragati), TAG-24, JL-220 (Phule Vyas), JL-286 (Phule Unap), TPG-41, TG-26, JL-501, Phule RHRG-6021, Phule Unnati, JL-776 (Phule Bharti) Sowing time: 15th June to 15th July |
| | | | Seed Treatment: To protect the crop from seed borne, apply 5 g of Thirum or 2 g of Carbendazim or 3 g of Mancozeb or 5 g of Trichoderma per kg of seeds. Then apply 25 g of Rhizobium and 25 g of PSB per kg of seed. Dry the treated seeds in the shade before sowing. |
| | | | Fertilizer dose: Apply 25 kg N + 50 kg P2O5 at sowing time. Fertilizer Management (as per revised recommendation 2013) For maximum production of groundnut, 400 kg/ ha of gypsum should be mixed in the soil along with chemical fertilizer doses (200 kg/ ha at the time of sowing and the remaining 200 kg/ ha at the time of peg formation). |
| | | Maize | Seed treatment: Apply 2 to 2.5 g of Thirum/ kg seed before sowing. Also use Azotobacter before sowing |
| | | | Fertilizer dose: 40 kg N, 60 kg P2O5, 40 kg K2O per hectare at the time of sowing, 40 kg N 30 days after sowing, 40 kg N per hectare 40-45 days after sowing. Micronutrients: In case of zinc deficiency in the soil, apply 20 to 25 kg zinc sulphate per hectare. |
| | | Bajara | Selection of Variety: A) Hybrid: Phule Adishakti, Phule Mahashakti, B) Improved: Dhanashakti |
| | | | Seed Treatment: A) Seed treatment with 20% salt solution: If certified seeds are not available, seeds should be treated with 20% salt solution before sowing. For this, dissolve 2 kg of salt in 10 liters of water. Light and fungus infected seeds floating on water should be removed and destroyed. Healthy and heavy seeds at the bottom should be separated, washed with water 2 to 3 times, then dried in shade and used for sowing. B) Metalaxyl 35 WS Seed treatment: Before sowing, apply 6 g of Metalaxyl 35 WS (apron) per kg of seed and then sow. C) Seed treatment of Azospirillum and PSB: 25 g of Azospirillum per kg of seed should be given and sown. This saves 20 to 25 per cent nitrogen fertilizer and increases production by 10 per cent. Also PSB 25 gm per kg of seed. |
| | | | Fertilizer dose: 40 kg N, 20 kg P2O5 and 20 kg K2O in light soil and 50 kg N, 25 kg P2O5 and 25 kg K2O per hectare in medium soil. At the time of sowing give half nitrogen and full phosphorus and potash and after 25 to 30 days give the remaining half nitrogen (when soil is moist). |
| | | Green Gram & Black Gram | Selection of Varieties: There are many varieties available in green gram. Vaibhav is suitable for kharif seasons. Vaibhav and BPMR-145 are the two varieties which are disease resistant and high yielding. Both are resistant to powder mildew disease. |
| | | | Black gram: TPU-4 and TAU-1 |
| | | | Seed treatment: Before sowing, apply 5 g of Trichoderma per kg of seed and then mix 25 g of Rhizobium bacterium powder in cold jaggery water. Trichoderma controls fungal diseases. Rhizobium increases the availability of nitrogen by growing nodules on the roots |
| | | | Fertilizer Dose: Apply 20 kg N and 40 kg P2O5 or 100 kg DAP per hectare to these two crops. Preferably chemical fertilizers should be mixed with well decomposed manure and apply near the seeds to improve the effect. |

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| Maharashtra | Gadchiroli | Cotton | Farmers are advised to start the sowing of cotton seed after receipt of sufficient rainfall 75-100 mm. Use short to medium duration insect pests and disease tolerant Bt /non bt varieties/ hybrids. Treat the cotton seed withCarboxin 37.5% + Thiram 37.5% DS 3 gm per kg seed before sowing. Also treat the seed with Azotobacter for nitrogen fixation and PSB @20-25 gm /kg seed for phosphate solubilization.Follow recommended spacing and fertilizer doses for arboretum cotton (60x15, 60x30cm, 40:20:20 Kg NPK/ha),Improved hirsutism (60x30cm, 60:30:30 Kg NPK/ha) and rainfed Bt hybrid cotton (90x45, 90x60, 60:30:30 Kg NPK/ha) and irrigated Bt Cotton (120x30, 120x60 cm, 120:60:60 Kg NPK/ha) Use Pendimethalin 38.7 % CS @1.5 -1.75 ai/ha (20-25 ml per lit of water) as a preemergence weedicide for control of weeds in early stage of crop |
| | | Pigeon Pea (Red Gram/Arhar) | Farmers are advised that Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate soil moisture condition.Good quality seeds of Arhar crop should be procured from authorized seller/certified seed holder only. Seed should treated with Rhizobium and PSB @ 25 g/kg of seed and Trichoderma @ 4g/kg of seed for nitrogen fixation, phosphorus availability and prevention from soil borne diseases Rhizobium or Phosphorus Dissolving Fertilizer (PSB) {250 gm per 10 kg of seed) should be used for seed treatment. Recommended varieties of Arhar areAKT8811, PKV-TARA, BSMR-853, BSMR-736 and ICPL-87119(Aasha). |
| | | Maize | Farmers can initiate the sowing of maize crop by judging sufficient moisture status and amount of rainfall received. Farmers are advised to treat the seed with Thirum + Carbondenzim @ 2 + 1g/kg of seed , Azatobacter, PSB 25g/kg of seed and Trichoderma 4g/kg of seed prior to sowing. |
| | | SOYABEAN | Ensure about sufficient soil moisture in the field for sowing of soybean crop. Seed should be treated with Rhizobium and PSB @ 25gm/kg of seed and Trichoderma @ 5g/kg of seed prior to sowing. It will helps in nitrogen fixation, phosphorus availability and prevention from infestation of soil borne diseases. Farmers should use 75 to 80 kg/ha seed for drilling method, whereas for dibbling it should be 45 to 50 kg/ha. |
| Maharashtra | Gondia | Pigeon Pea ( Red Gram) | Field preparation for sowing of pigeon pea may be done in this week |
| | | | Farmers are advised to procure good quality seeds from certified source. Select disease and pest resistant variety for sowing like ICPL-87, AKT-8811, PKV-Tara, BSMR-853, BSMR736, ICPL-88119 Aasha). |
| | | | Before sowing pigeon-pea seeds should be treated with crop specific Rhizobium culture and Phosphate Solubilizing Bacteria. This treatment increases the crop production. |
| | | | Carryout germination test of the available seed which should be minimum 70% in order to have optimum plant population. |
| Maharashtra | Hingoli | Soybean | Apply 30:60:30 kg NPK / ha at the time of sowing of soybean crop. If phosphorus is not applied to SSP then add sulfur @ 20 kg per /ha. Sowing of soybean can be done up to 15th July. |
| | | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| | | Pearl millet | The recommended dose of fertilizer for pearl millet crop is 60:30:30 kg NPK per hectare for medium soil and 40:20:20 kg NPK per hector for light soil, half dose of Nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of pearl millet can be done up to 20th July. |
| Maharashtra | Jalgaon | Cotton | As a precautionary measure for effective control of pink bollworm collect and destroy all the trash, debris etc. of previous crop by burning which will help in elimination of the dormant pest and diseases. |
| Maharashtra | Jalna | Soybean | Apply 30:60:30 kg NPK / ha at the time of sowing of soybean crop. If phosphorus is not applied to SSP then add sulfur @ 20 kg per /ha. Sowing of soybean can be done up to 15th July. |
| | | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| | | Pearl millet | The recommended dose of fertilizer for pearl millet crop is 60:30:30 kg NPK per hectare for medium soil and 40:20:20 kg NPK per hector for light soil, half dose of Nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of pearl millet can be done up to 20th July. |
| Maharashtra | Kolhapur | Maize | Carry out sowing of Maize crop at vafasa condition. ? Following varieties of Maize should be selected for sowing. ? Very Early maturing:- Vivek-9, Vivek-21, Early maturing:- Panchganga, Prakash, Kiran, Midlate:Karvir, Manjari, Navjyot and Late maturing: Prabhat ? Seed rate: 15 to 20 kg per hector. ? Seed treatment: Treat the seeds with Thiram@2.5 gram per kg of seeds and then carry out seed treatment with Azatobactor. |
| | | Groundnut | Carry out sowing of Groundnut crop at vafasa condition of soil ? Collect the seeds of following varieties of groundnut for sowing in kharif season S.B.11, J.L.-24,(Phule Pragati), T.A.G.-24, J.L.-501, Phule Unnati, Phule Bharti ? Seed treatment: To protect crop from seed borne diseases apply 3 gram Mancozeb or 5 gram Trichoderma biological fungicide for 1 kg of seed then apply 25 gram rhizobium and 25 gram Phosphorus solubilising bacterial culture and dry it under shade. |
| | | Soyabean | Carry out sowing of Soybean if sufficient moisture present in soil upto first fortnight of June. ? Collect the seeds of following varieties of Soybean J.S.-335,MACS1188,Phule Kalyani, Phule Agrani, Phule Sangam, J.S.9305. ? For drilling 75 to 80 kg/ha seed requires while for dibbling 45 to 50 kg of seed requires. ? Seed treatment: To protect crop from fungal diseases apply 5 gram Trichoderma biological fungicide for 1 kg of seed and for nitrogen fixation apply rhizobium @250 gram + Phosphorus solubilising bacterial culture @250 gram for 10 kg of seeds. ? Give 50 kg Nitrogen, 50 kg Phosphorus and 45 kg Potash at the time of sowing. |
| Maharashtra | Latur | Soybean | Apply 30:60:30 kg NPK / ha at the time of sowing of soybean crop. If phosphorus is not applied to SSP then add sulfur @ 20 kg per /ha. Sowing of soybean can be done up to 15th July. |
| | | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| | | Pearl millet | The recommended dose of fertilizer for pearl millet crop is 60:30:30 kg NPK per hectare for medium soil and 40:20:20 kg NPK per hector for light soil, half dose of Nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of pearl millet can be done up to 20th July. |
| Maharashtra | Nagpur | Soyabean | The spacing between two rows and two plants should be 30 X 8 or 45 X 5 cm and sowing should be done horizontally and east to westdirection.For sowing J.S.-335, J.S.-9305, M.A.U.S. -71, M.A.U.S. -158, M.A.U.S. -162,J.S.-20-29, J.S.-20-34, A.M.S.-1001(PDKV Yellow Gold),AMS-MB-5-18 are recommended variety should be used.Treat the soybean seed with Carboxin 37.5% + Thiram 37.5% DS 3 gm per kg seed before sowing.In order to control yellow mosaic virus in soybean crop, seed treatment should be done as Thiamethoxam 30 FS 10 ml per kg seed or Imidacloprid 48 FS 1.25 ml per kg seed is recommended. |
| | | Pigeon Pea (Red Gram/Arhar) | Rhizobium or Phosphorus Dissolving Fertilizer (PSB) {250 gm per 10 kg of seed) should be used for seed treatment. Recommended varieties of Arhar areAKT-8811, PKV-TARA, BSMR-853, BSMR-736 and ICPL-87119 (Aasha). Treat the pigeon pea seed with Carboxin 37.5% + Thiram 37.5% DS 3 gm per kg seed before sowing. |
| | | Green Gram | PKV Moog-8802, PKV Greengold (AKM 9911) varieties of green gram should be select for cultivation of green gram crop, 12-15 kg seed per hectare, spacing between two rows is 30/45 cm and spacing between two plants is 10 cm. Seed treatment, fertilizers as well as bacterial culture should be used before sowing. Apply 20 kg N and 40 kg P per hectare at the time of sowing. |
| | | Black Gram | For cultivation of Black gram crop, TAU-1, TAU-2, PKV udid-15 and PKV black gold varieties should be select, 12-15 kg seed per hectare, spacing between two rows 30/45 cm and spacing between two plants 10 cm. Seed treatment, fertilizers as well as bacterial culture should be used before sowing. Apply 20 kg N and 40 kg P per hectare at the time of sowing. |
| | | Cotton | Intercropping system viz., Cotton + Green gram (1:2) or Cotton + Black gram (1:1) or Cotton + soybean (1:1) or Cotton + Pigeon pea (6:1 or 8-10:2) should be adopted for sustainable production. |
| | | | Follow recommended spacing and fertilizer doses for arboretum cotton (60x15, 60x30cm, 40:20:20 Kg NPK/ha), Improved hirsutism (60x30cm, 60:30:30 Kg NPK/ha) and rainfed Bt hybrid cotton (90x45, 90x60, 60:30:30 Kg NPK/ha) and irrigated Bt Cotton (120x30, 120x60 cm, 120:60:60 Kg NPK/ha). |
| | | | Use short to medium duration sucking pests tolerant Bt /non bt varieties/ hybrids. Treat the cotton seed with Carboxin 37.5% + Thiram 37.5% DS 3 gm per kg seed before sowing. Also treat the seed with Azotobacter for nitrogen fixation and PSB @20-25 gm /kg seed for phosphate solubilization. Include the intercrops like green gram and Black gram in cotton in 1:1 row proportion. Use Pendimethalin 38.7 % CS @1.5 -1.75 ai/ha (20-25 ml per lit of water) as a pre-emergence weedicide for control of weeds in early stage of crop. |

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| Maharashtra | Nanded | Soybean | Apply 30:60:30 kg NPK / ha at the time of sowing of soybean crop. If phosphorus is not applied to SSP then add sulfur @ 20 kg per /ha. Sowing of soybean can be done up to 15th July. |
| | | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| | | Pearl millet | The recommended dose of fertilizer for pearl millet crop is 60:30:30 kg NPK per hectare for medium soil and 40:20:20 kg NPK per hector for light soil, half dose of Nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of pearl millet can be done up to 20th July. |
| Maharashtra | Nandurbar | Groundnut | Soil Selection: Choose medium, deep, well drained soil with adequate amount of lime and organic matter. ? Selection of Variety: SB-11, JL-24 (Phule Pragati), TAG24, JL-286 (Phule Unap), TPG-41, TG-26, JL-501, Phule Unnati, JL-776 (Phule Bharti) ? Seed Rate: variety wise seed per hectare used as follows. ? 100 kg: SB-11, T.A.G. -24, TG-26, JL-501 ? 120 to 125 kg: Phule Pragati, TPG-41, Phule Unnati, Phule Bharati, Phule Unap |
| | | Sorghum (Jowar/Great Millet) | Soil Selection: This crop can be grown in well drained and 5.5 to 8.5 sq. M. Chikan Poityachi, medium black soil is suitable. ? Selection of varieties for sowing: Hybrid varieties: CSH-5, CSH-9, CSH-13, CSH-14, CSH- 16, C.S.H.-17, C.S.H.-18, C.S.H.-21, C.S.H.-23, C.S.H. 25, C.S.H. 27, C.S.H. 30 and C.S.H. 35 ? Improved varieties: SPV-462, CSV-13, CSV-15, CSV-17, PVK-801, c. SV20, CSV -23, c. S. V27 and CSV. 28 |
| | | Soyabean | Selection of Variety for sowing : JS-335, MACS-1188, Phule Kalyani (DS-228), JS-9305, KS-103, Phule Agrani, (KDS 344) and Phule Sangam (KDS 726) ? Seed rate: 55 to 75 kg seed per hectare havin germination capacity of 70% or more should be used for sowing |
| | | Pigeon Pea (Red Gram/Arhar | Selection of varieties for sowing: Vipula, Phule Rajeshwari, ICPL-87, BSMR-853, BSMR736, BDN-711 and BDN-716 ? Seed Rate: Sowing of ICPL-87 variety requires 18 to 20 kg seed per hectare. 12 to 15 kg seed per hectare is sufficient for medium duration Rajeshwari, Vipula and BDN-711 varieties. 5 to 6 kg seed per hectare is sufficient for long duration sowing varieties. |
| | | Green Gram | Selection of Varieties: There are many varieties available in green gram. Vaibhav is suitable for kharif seasons. Vaibhav and BPMR-145 are the two varieties which are disease resistant and high yielding. Both are resistant to powdery mildew disease. ? Seed Rate:15 to 20 kg/ hectare |
| | | Black Gram | Selection of Varieties Black gram: TPU-4 and TAU-1 ? Seed Rate:15 to 20 kg/ hectare |
| Maharashtra | Nasik | Soybean | 1.Carry out one ploughing and 2 harrowing. 2.Collect the seeds of following varieties of Soybean J.S.-335,MACS1188,Phule Kalyani, Phule Agrani, Phule Sangam, J.S.9305. 3. For drilling 75 to 80 kg/ha seed requires while for dibbling 45 to 50 kg of seed requires. |
| | | Maize | 1. Kharif Maze crop should be sown from the second Fortnight of June to the second fortnight of July.<br>2. Maize seed rate @15-20 kg/ha for dibbling |
| Maharashtra | Osmanabad | Pigeon pea | Seed rate of 12 to 15 kg/ha is sufficient for sowing of Pigeon pea crop. Spacing of 45 X 15 or 60 X 20 cm should be maintained between row to row and plant to plant. Before sowing seed should be treated with Carboxin 37.5% + Thiram 37.5% @ 3 gm/kg of seed and Biofertilizers like Rhizobium and P.S.B. @ 250 gm/10 kg of seed. After seed treatment seeds are allow to dry in the shed. |
| | | Green/ Black gram | 12 to 15 kg/ha seed is required for sowing of Green gram/Black gram crop and spacing of 30 X 10 cm should be maintained between row to row and plant to plant. Seed should be treated with Bavistin @ 2.5 gm/kg or biofungicides Trichoderma @ 25 gm/kg of seed. After that seeds are treated with Rhizobium and P.S.B. @ 250 gm/10 kg of seed. After seed treatment seed are allow to dry in shed. |
| Maharashtra | Parbhani | Kharif sorghum | The recommended dose of fertilizer of Kharif sorghum is 80:40:40 kg NPK / ha. half dose of nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of Kharif sorghum can be done up to first week of July. |
| | | Pearl millet | The recommended dose of fertilizer for pearl millet crop is 60:30:30 kg NPK per hectare for medium soil and 40:20:20 kg NPK per hector for light soil, half dose of Nitrogen and total amount of phosphorus and potash should be applied at the time of sowing. Sowing of pearl millet can be done up to 20th July. |
| Maharashtra | Pune | Paddy | Preparatory tillage operations should be carried out for nursery beds for paddy seedlings. One R (guntha) area is sufficient for one acre seedlings. Improved and hybrid seeds should be made available from Govt. machinery or Agril. University for nursery beds. Ash from paddy straw should be made available for nursery bed preparation. While preparing nursery beds the height should be kept 15 cm (raised beds) with width 1 meter and length as per requirement. Mix cow dung manure 250 kg per guntha area. Before sowings seeds soak the seed in solution prepared from 300 gm salt in 10 lit. of water for 20 minutes and then dry them and use for sowing. Before sowing apply 2.5 gm per kg seed with carbondanzim or thiaram/ capton fungicide. After that apply azotobactor, phosphorus solubilizing bacteria and azospirilium biofertilizer 250 gm per 10 kg of seed as seed treatment. |
| Maharashtra | Raigad,Ratnagiri | Groundnut | Groundnut varieties S.B. 11, T.A.G.24, Phule pragati, konkan gaurav, T.G.26, Kokan Trombe @40-50Kg/acre are suitable for kharif groundnut. Before sowing, treat the seed with Thiram fungicide @3 gm/kg of seeds. After that treat the seed with Rhizobium @ 20 gms and Phosphate solubilizing bacteria biofertilizer @50 gms per kg of seed. Carryout sowing by dibbling the seed at 30 X 15 cm spacing (for erect type) and at 45 X 15 cm spacing (for semi-spreading and spreading type) and 20 cm spacing for broad bed furrow of 80 cm width. Apply fertilizer dose of 22 kg urea, 125 kg SSP and 20 kg of MOP per acre at the time of sowing. For control of weeds in groundnut apply Butachlor @ 50 ml per 10 liter of water immediate after sowing on wet flatbed during clear weather. |
| Maharashtra | Sangali | Groundnut | Carry out sowing of Groundnut crop at vafasa condition of soil. ? Collect the seeds of following varieties of groundnut for sowing in kharif season S.B.11, J.L.-24,(Phule Pragati), T.A.G.-24, J.L.-501, Phule Unnati, Phule Bharti ? To protect crop from seed borne diseases apply 3 gram Mancozeb or 5 gram Trichoderma biological fungicide for 1 kg of seed then apply 25 gram rhizobium and 25 gram Phosphorus solubilising bacterial culture and dry it under shade. |
| | | Soyabean | Carry out sowing of Soybean if sufficient moisture present in soil upto first fortnight of June. ? Collect the seeds of following varieties of Soybean J.S.-335,MACS1188,Phule Kalyani, Phule Agrani, Phule Sangam, J.S.9305. ? For drilling 75 to 80 kg/ha seed requires while for dibbling 45 to 50 kg of seed requires. ? To protect crop from fungal diseases apply 5 gram Trichoderma biological fungicide for 1 kg of seed and for nitrogen fixation apply rhizobium @250 gram + Phosphorus solubilising bacterial culture @250 gram for 10 kg of seeds. ? Give 50 kg Nitrogen, 50 kg Phosphorus and 45 kg Potash at the time of sowing. |
| | | Green Gram | Carry out sowing at vapasa condition soil. ? Use Vaibhav, A.K.M-4, B.M.2003- 2,B.M.2002-1 and Utkarsha varieties for sowing of Green gram. ? Use B.D.U-1 and T.P.U.-4 varieties for sowing of Black gram. ? Treat the seeds with Trichoderma @5 gram/kg of seeds and then apply 25 gram Rhizobium (Cowpea group) by mixing it with cold water of Jaggary |

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| Maharashtra | Satara | Pearl Millet | Collect the seeds of following varieties of Bajara crop for sowing in Kharif season. ? Hybrid : Phule Adishakti, Phule Mahashakti and Improved varieties : Dhanshakti |
| | | Maize | Carry out sowing of Maize crop at vafasa condition. ? Following varieties of Maize should be selected for sowing. ? Very Early maturing:- Vivek-9, Vivek-21, Early maturing:- Panchganga, Prakash, Kiran, Midlate:Karvir, Manjari, Navjyot and Late maturing: Prabhat ? Seed rate: 15 to 20 kg per hector. ? Seed treatment: Treat the seeds with Thiram@2.5 gram per kg of seeds and then carry out seed treatment with Azatobactor |
| | | Green Gram | Carry out sowing at vapasa condition soil. ? Use Vaibhav, A.K.M-4, B.M.2003- 2,B.M.2002-1 and Utkarsha varieties for sowing of Green gram. ? Use B.D.U-1 and T.P.U.-4 varieties for sowing of Black gram. ? Treat the seeds with Trichoderma @5 gram/kg of seeds and then apply 25 gram Rhizobium (Cowpea group) by mixing it with cold water of Jaggary. |
| | | Groundnut | Carry out sowing of Groundnut crop at vafasa condition of soil. ? Collect the seeds of following varieties of groundnut for sowing in kharif season S.B.11, J.L.-24,(Phule Pragati), T.A.G.-24, J.L.-501, Phule Unnati, Phule Bharti ? To protect crop from seed borne diseases apply 3 gram Mancozeb or 5 gram Trichoderma biological fungicide for 1 kg of seed then apply 25 gram rhizobium and 25 gram Phosphorus solubilising bacterial culture and dry it under shade. |
| | | Soyabean | Carry out sowing of Soybean if sufficient moisture present in soil up to first fortnight of June. ? Collect the seeds of following varieties of Soybean J.S.-335,MACS-1188,Phule Kalyani, Phule Agrani, Phule Sangam, J.S.9305. ? For drilling 75 to 80 kg/ha seed requires while for dibbling 45 to 50 kg of seed requires. ? To protect crop from fungal diseases apply 5 gram Trichoderma biological fungicide for 1 kg of seed and for nitrogen fixation apply rhizobium @250 gram + Phosphorus solubilising bacterial culture @250 gram for 10 kg of seeds. ? Give 50 kg Nitrogen, 50 kg Phosphorus and 45 kg Potash at the time of sowing. |
| Maharashtra | Sindhudurg | Groundnut | Carry our preliminary cultural/farm operations for sowing of groundnut. Plough the field deeply and after last leveling add 10 tonnes of FYM or Compost per ha in the soil. Use 100 to 125 kg of seed/per ha for sowing. Use varieties like Konkan Gaurav and Trombay Konkan (Tapora) as well as high yielding varieties like TG-26, TAG-24 and TPG-41 recommended by Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli for Konkan region. Seed treatment with Thiram @ 3 gm/kg of seed is advocated against wilt disease in groundnut. |
| Maharashtra | Solapur | Green Gram & Black Gram | Selection of Varieties: There are many varieties available in green gram. Vaibhav is suitable for kharif seasons. Vaibhav and BPMR-145 are the two varieties which are disease resistant and high yielding. Both are resistant to powdery mildew disease. |
| | | | Black gram: TPU-4 and TAU-1 |
| | | | Seed Rate:15 to 20 kg/ hectare |
| | | | Seed Treatments: Before sowing, apply 5 gm of Trichoderma powder per kg of seed and then mix 25 gm of Rhizobium bacterial powder in cold jaggery water. Rhizobium bacterial culture of Chawli group should be used for seeds of green gram and urad. Trichoderma controls fungal diseases. Rhizobium increases the availability of nitrogen by increasing nodules on roots. |
| | | | Fertilizer Dose: Apply 20 kg Nitrogen and 40 kg Phosphorous at the time of sowing to both Green gram and Black gram crops. |
| | | Groundnut | Selection of Variety: SB-11, JL-24 (Phule Pragati), TAG-24, JL-286 (Phule Unap), TPG-41, TG-26, JL-501, Phule Unnati, JL-776 (Phule Bharti) Seed Treatments: Apply 5 gm of Thyrum or 2 gm of Carbendism or 3 gm of Mancozeb or 5 gm of Trichoderma biological fungicides per kg of seeds before sowing to protect the crop from seed borne and seedling diseases. Then apply 25 g of Rhizobium and 25 g of phosphorus soluble bacterial enhancer (solid or liquid) per kg of seed. Seed treated seeds should be dried in the shade and sown. Intercropping: In kharif groundnut crop, soybean, sunflower, sesame, Green gram, Black gram, Pigeon Pea, intercrop should be taken in the ratio of 6: 2, groundnut + sorghum in the ratio of 1: 1 and cotton in the ratio of 1: 1. Experiments have shown that intercrops bring more economic benefits. Sowing of groundnut + soybean (4: 1) and castor (two rows) on the side helps in control of leaf eating caterpillar |
| | | Maize | Method of sowing: Token |
| | | | Token spacing: 75 cm x 20 cm - for late and medium varieties : 60 cm x 20 cm - for short duration varieties |
| | | | Seeds: 15 to 20 kg per hectare |
| | | | Seed Treatments: Apply 2 to 2.5 gms of Thyrum per kg of seed before sowing. Also use Azatobacter before sowing. |
| | | | Fertilizer dose: Apply 40 kg Nitrogen, 60 kg Phosphorous, 40 kg Potash per hectare at the time of sowing. |
| | | Soybean | Selection of Variety: JS-335, MACS-1188, Phule Kalyani (DS-228), JS-9305, KS-103, Phule Agrani, (KDS 344) and Phule Sangam (KDS 726) |
| | | | Seed Treatments: Rub soybean seed 5 gms of Trichoderma per kg of seed to protect against fungal diseases. Also apply Rhizobium 250 g + Phosphorus soluble bacteria (PSB) 250 g per 10 kg seed of soybean group for nitrogen fixation.. |
| | | | Intercropping: Take soybean + Pigeon Pea (3: 1). |
| | | Pigeon Pea | Selection of varieties: Vipula, Phule Rajeshwari, ICPL-87, BSMR-853, BSMR736, BDN-711 and BDN-716 |
| | | | Seed Treatments: Before sowing, 5 gm of Trichoderma or 2 gm of Thyrum + 2 gm of Carbendism should be applied per kg of seed. These followed by 250 g of Rhizobium and Phosphorus soluble bacteria (PSB). Bacterial Cultivation Rub 10 kg of seeds in cold solution of jaggery. |
| | | | Intercropping: Pigeon Pea is mostly taken as an intercrop. Pigeon Pea + Pearl millet (1: 2), Pigeon Pea + sunflower (1: 2), Pigeon Pea + soybean (1: 3), Pigeon Pea + Sorghum (1: 2 or 1: 4), Pigeon Pea + Cotton (1: 6/1: 8), Pigeon Pea + Groundnut, Pigeon Pea + Mug (1: 3), Pigeon Pea + Black Gram (1: 3). |
| Maharashtra | Washim | Cotton | Farmers are advised to start the cotton sowing after receipt of sufficient rainfall of 75- 100 mm. Use short to medium duration sucking pests tolerant Bt /non bt varieties/ hybrids. Treat the cotton seed with Carboxin 37.5% + Thiram 37.5% DS 3 gm per kg seed before sowing. Also treat the seed with Azotobacter for nitrogen fixation and PSB @20-25 gm /kg seed for phosphate solubilization. Include the intercrops like green gram and Black gram in cotton in 1:1 row proportion. Use Pendimethalin 38.7 % CS @1.5 -1.75 ai/ha (20-25 ml per lit of water) as a preemergence weedicide for control of weeds in early stage of crop. |
| | | | Follow recommended spacing and fertilizer doses for arboretum cotton (60x15, 60x30cm, 40:20:20 Kg NPK/ha), Improved hirsutism (60x30cm, 60:30:30 Kg NPK/ha) and rainfed Bt hybrid cotton (90x45, 90x60, 60:30:30 Kg NPK/ha) and irrigated Bt Cotton (120x30, 120x60 cm, 120:60:60 Kg NPK/ha). |
| | | Soyabean | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. The spacing between two rows and two plants should be 30 X 8 or 45 X 5 cm and sowing should be done horizontally and east to west direction. For sowing J.S.-335, J.S.-9305, M.A.U.S. -71, M.A.U.S. -158, M.A.U.S. -162, J.S.-20-29, J.S.-20-34, A.M.S.-1001 (PDKV Yellow Gold), AMS-MB-5-18 are recommended variety should be used. Before sowing soyabean seed should be treated with Rhizobium Japonikam + PSB + trichoderma @ 25+25+5 gm/kg. |
| | | Green Gram | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. For cultivation of green gram PKV Moog-8802, PKV Green gold (AKM 9911),PKV AKM-4,BM 2003-2 varieties of green gram should be select for cultivation of green gram crop, 12-15 kg seed per hectare, spacing between two rows is 30/45 cm and spacing between two plants is 10 cm. Before sowing green gram seed should be treated with Rhizobium + PSB + trichoderma @ 25+25+4 gm/kg |
| | | Black Gram | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. For cultivation of black gram PKV-udid-15,TAU-1,TAU-2 and PDKV black gold (AKU-10-1). Before sowing black gram seed should be treated with Rhizobium + PSB + trichoderma @ 25+25+4 gm/kg. |
| | | Pigeon Pea (Red Gram/Arhar) | Sowing should be done only after ensuring adequate rainfall (75 to 100 mm), adequate moisture in the soil and soil should be in Wafsa condition. . For cultivation of Pigeon pea crop varieties to be chosen as per the soil type are-early varieties for medium soil type( TAT-10,IPCL 87,AKT-8811), medium duration varieties for medium to heavy soil type(BSMR-736,PKV Tara,BSMR-853,BDN-716,BDN-708) and long duration varieties for heavy soil type(IPCL-87119,C-11) seed rate 12 to 15 kg/ha. Before sowing Pigeon pea seed should be treated with Rhizobium + PSB + trichoderma @ 25+25+4 gm/kg. |

# UTTAR PRADESH

The cultivable area is 82.1% of total geographical area and the net area sown is 68.5% of cultivable area. The percentage of net irrigated sown area is 80.3%. Traditionally rain fed and irrigated agriculture is common.

## Kharif Major Crops

The main crops grown are rice, maize, pigeon pea, sorghum, pearl millet, moong beans during Kharif season. The important cash crops of the region are sugarcane, potato, tobacco, chillies, turmeric and coriander with supplemental irrigation. Rice–wheat cropping system is more predominant.

## Agro-Climatic Zones of Uttar Pradesh

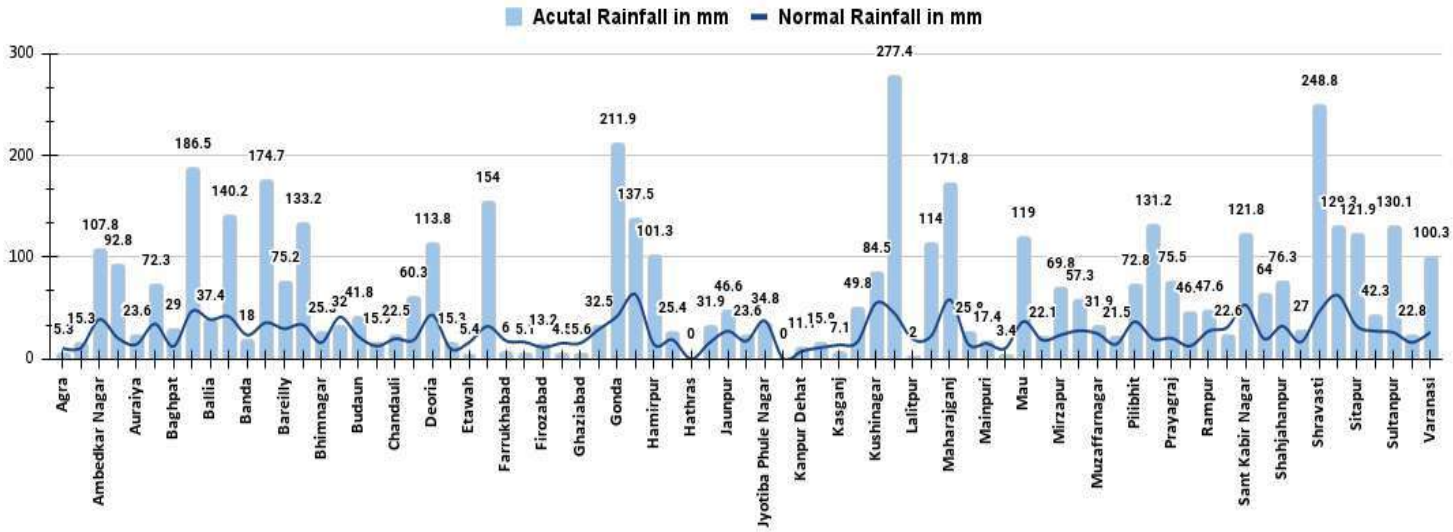
| Sr.No. | Agro-Climatic Regions | Districts |
|---|---|---|
| 1 | Bhawar and plain, Tarai plain | Pilibhit, Sambhal (Bhim Nagar), Bareilly, Rampur, Moradabad, Shahjahanpur, Budaun and Jyotibaphule Nagar |
| 2 | Western Plain Zone | Saharanpur, Muzaffarnagar, and Baghpat |
| 3 | Mid-western plain zone | Bijnor, Moradabad, Amroha, Rampur, Bareilly, Badaun, Pilibhit and Shahjahanpur |
| 4 | Western sub-tropical zone | Aligarh, Mahamaya Nagar, Mathura, Agra, Firozabad, Etah, and Mainpuri |
| 5 | Mid plain zone | Farrukhabad, Kannauj, Etawah, Kanpur Nagar, Kanpur Dehat, Unnao, Hardoi, Kheri, Sitapur, Lucknow, Raebareli, Fatehpur, Pratapgarh and Allahabad |
| 6 | Bundelkhand Zone | Lalitpur, Jhansi, Jalaun, Hamirpur, Banda and Chitrakoot, Mahoba |
| 7 | North Eastern Plain Zone | Bahraich, Balrampur, Gonda, Siddharth Nagar, Basti, Maharajganj, Kushinagar and Deoria |
| 8 | Eastern Plain Zone | Barabanki, Faziabad, Sultanpur, Jaunpur, Azamgarh, Amethi, Mau, Ballia, Ghazipur, Varanasi and Sant Ravidasnagar |
| 9 | Bindhya Zone | Mirzapur and Sonbhadra |

## Reservoir Storage Status

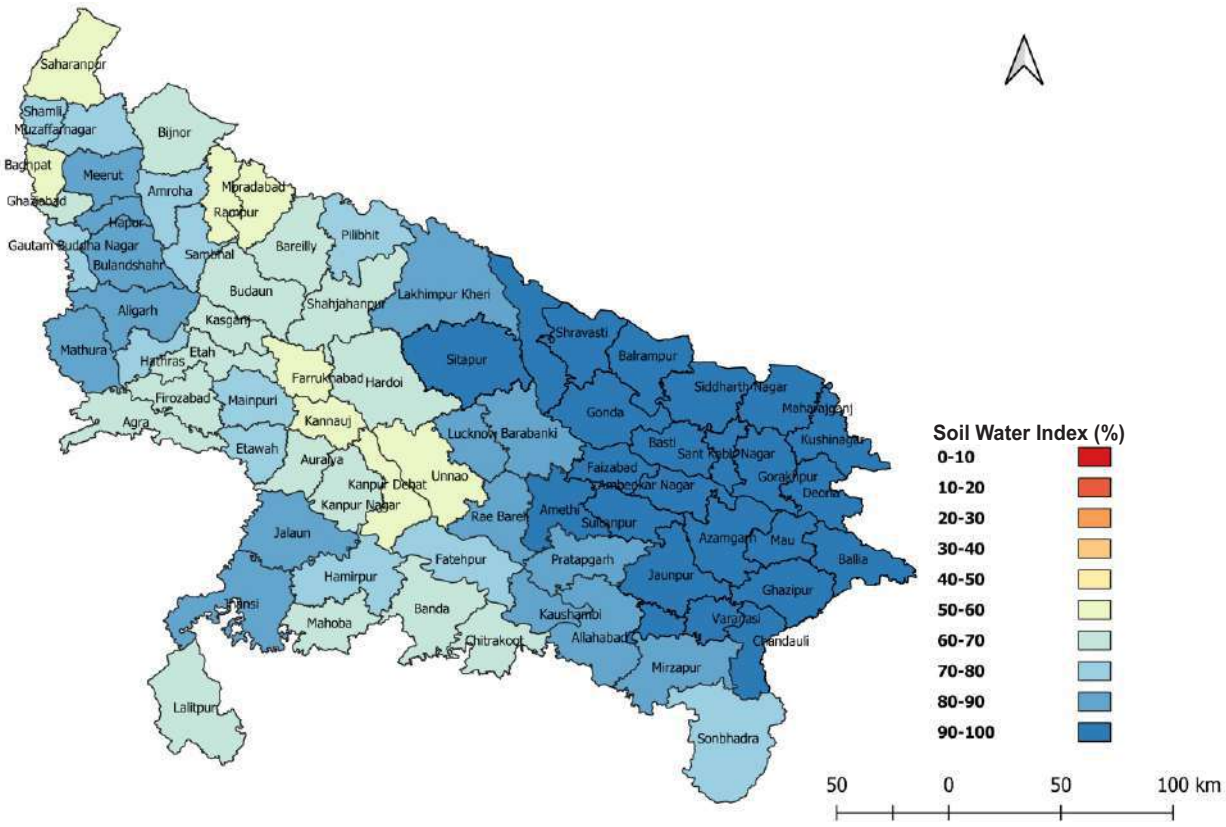
| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| MATATILA | 308.46 | 0.707 | 301.33 | 0.073 | 301.75 | 0.093 |
| RIHAND | 268.22 | 5.649 | 256.18 | 0.900 | 256.00 | 0.847 |
| SHARDA SAGAR | 190.5 | 0.33 | 188.70 | 0.305 | 187.30 | 0.234 |
| SIRSI | 217.93 | 0.19 | 209.50 | 0.009 | 215.00 | 0.099 |
| MAUDAHA | 147.8 | 0.179 | 141.30 | 0.016 | 144.10 | 0.065 |
| JIRGO | 98.2 | 0.147 | 92.31 | 0.042 | 94.70 | 0.074 |
| RANGAWAN | 233.17 | 0.155 | 220.58 | 0.002 | 227.32 | 0.053 |
| MEJA | 178 | 0.299 | 162.00 | 0.046 | 153.28 | 0.001 |

| LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|
| 13 | 78 |
| 15 | 106 |
| 71 | 130 |
| 52 | 9 |
| 36 | 25 |
| 50 | 57 |
| 34 | 4 |
| 0 | 4600 |

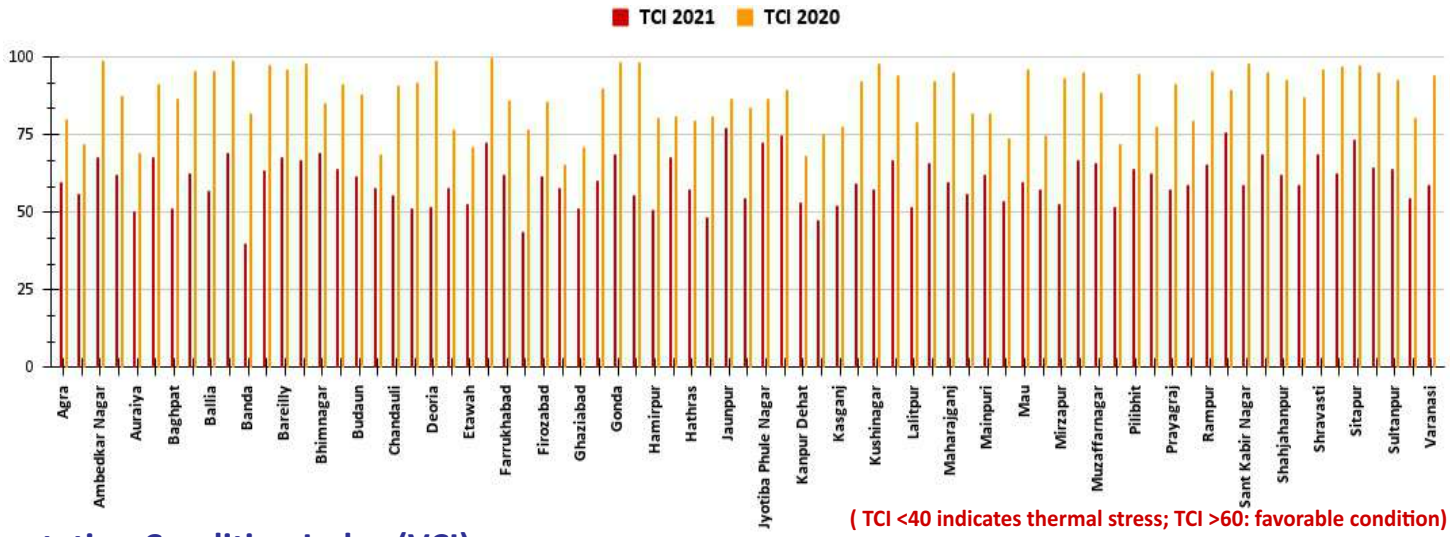
## Rainfall




## Soil Water Index

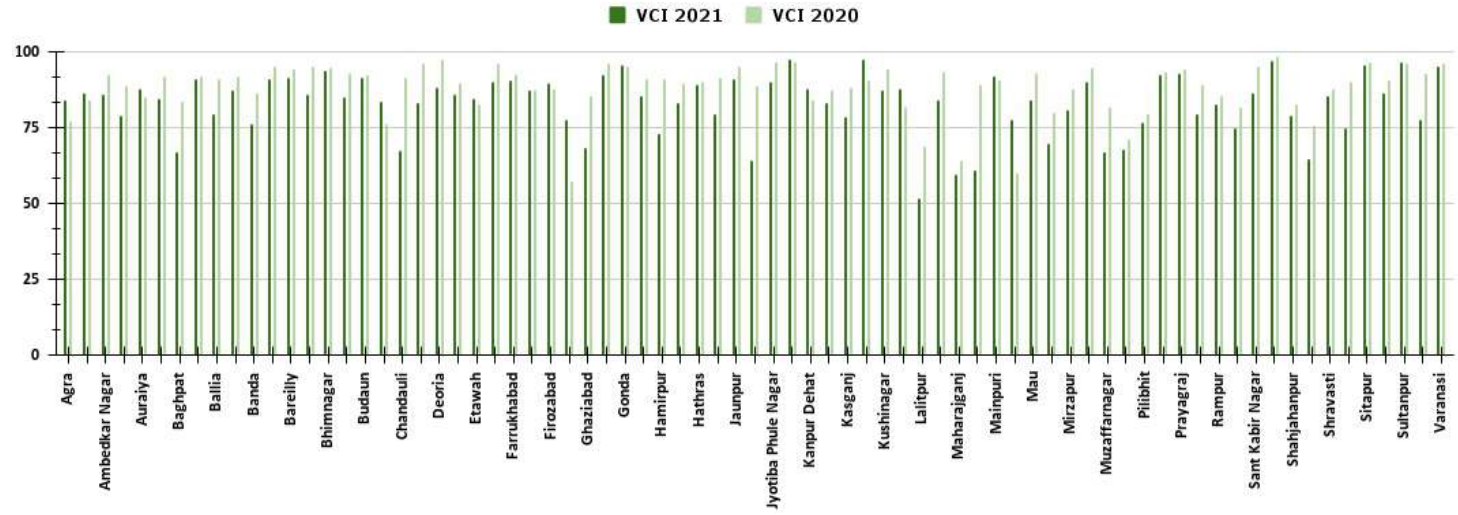


## Temperature Condition Index (TCI)



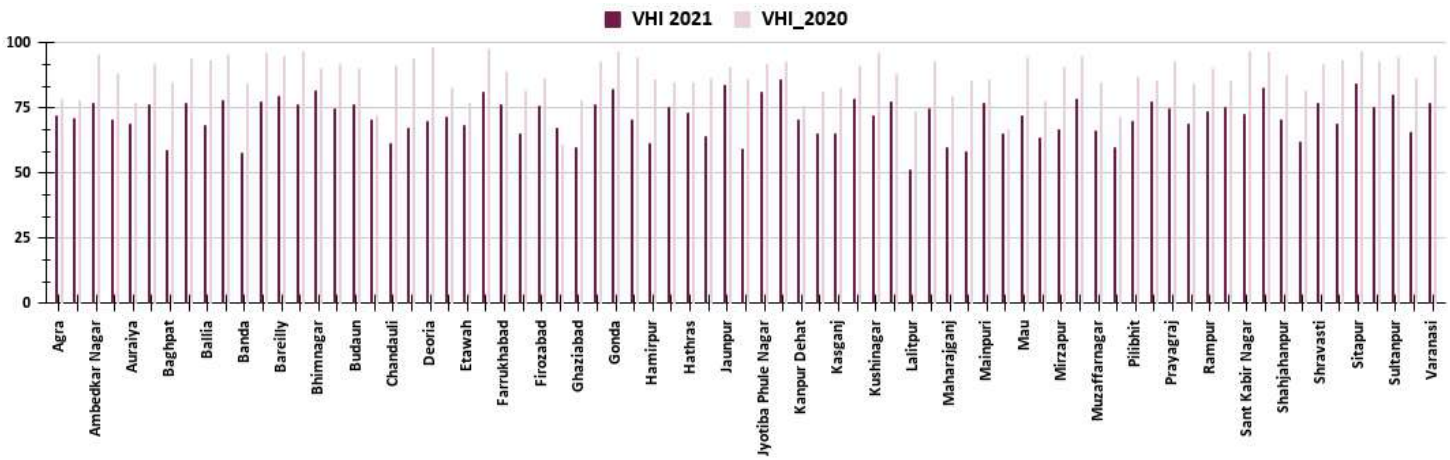

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

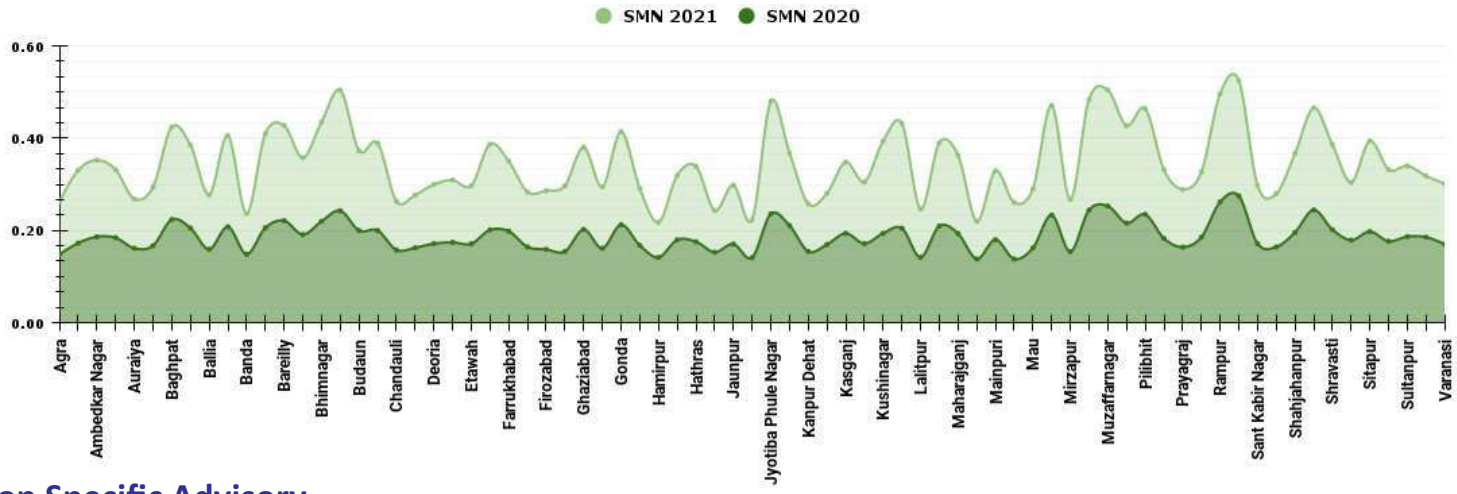
## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Smoothed Normalized Difference Vegetation Index (SMN)




## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Uttar Pradesh | Amroha | Pigeon Pea (Red Gram/Arhar) | Prabhat, type 21andParas species of pigeonpea, are early ripening and bahar is late ripening species In the case of irrigation, sow the arhar now or else in the absence of irrigation, when the rain starts. |
| | | Maize | Hybrid maize Ganga-2 Ganges-5 species, can be sown by if there is irrigation facility, then sowing can be done by June 15, otherwise you can sow maize by June 25. |
| Uttar Pradesh | Baghpat | Sorghum (Jowar/Great Millet) | Sow Jowar in the last week of June. |
| Uttar Pradesh | Bahraich | Sorghum (Jowar/Great Millet) | Sowing of pigenpea may be done in this week. Adequate moisture should be maintained for optimum germination of seeds. Farmers are advised to procure good quality seeds from certified sources. Before sowing pigeon pea, seeds should be treated with crop specific Rhizobium culture and Phosphate Solublesing Bacteria (PSB). |
| Uttar Pradesh | Balrampur | Pigeon Pea (Red Gram/Arhar) | Sowing of pigenpea may be done in this week. Adequate moisture should be maintained for optimum germination of seeds. Farmers are advised to procure good quality seeds from certified sources. Before sowing pigeon pea, seeds should be treated with crop specific Rhizobium culture and Phosphate Solublesing Bacteria (PSB). |
| Uttar Pradesh | Banda | Pigeon Pea (Red Gram/Arhar) | Pigeon pea: Sowing of short duration variety viz; Paras, UPAS-120, Type-21 and Pusa 992 after 30 May |
| | | Black Gram | Harvesting should be done as early as possible of green gram and black gram crop of zaid season. |
| Uttar Pradesh | Bijnor,Budaun,Farrukhabad,Bareilly Meerut,Moradabad,Muzaffarnagar, Pilibhit,Rampur,Sambhal | Pigeon Pea (Red Gram/Arhar) | Prabhat, type 21andParas species of pigeonpea, are early ripening and bahar is late ripening species In the case of irrigation, sow the arhar now or else in the absence of irrigation, when the rain starts. |
| | | Maize | Hybrid maize Ganga-2 Ganges-5 species, can be sown by if there is irrigation facility, then sowing can be done by June 15, otherwise you can sow maize by June 25. |
| Uttar Pradesh | Bulandshahr | Maize | Before sowing maize, treat maize seed at the rate of 2.5 gm Thiram per kg seed. |
| Uttar Pradesh | Chitrakoot | Sorghum (Jowar/Great Millet) | Farmers are advice to after the clouds open, prepare for sowing of jowar crop. |
| | | Pigeon Pea (Red Gram/Arhar) | Farmers are advice to do after the cloud open, timely sowing of pigeon pea crop |
| Uttar Pradesh | Etah | Green Gram | Break the ripe beans of moong and urad. |
| Uttar Pradesh | Etawah,Hardoi,Hathras Kanpur-Dehat,Kanpur-Nagar Kheri,Firozabad,Sitapur,Unnao | Maize | Sow any one variety of Kharif maize recommended hybrid variety- D-7074, D-9144, M-2525, Ganga, Azad Shekhar Maize-1, Azad Shekhar Maize-2, Azad Uttam and Azad Kamal etc. Farmers are informed that in view of the possibility of rain, they should do the sowing of maize after June 21, 2021 and make proper arrangements for drainage of excessive rain water from the maize crop sown on time |
| | | Black Gram,Green Gram | Farmers are informed that in view of the possibility of rain, they should do the harvesting of mature urd crops after June 21, 2021 and make proper arrangements for drainage of excessive rain water from standing urd crops in the field. And after threshing the harvested crops, separate the grain from the straw and structure the grain. |
| Uttar Pradesh | Faizabad | Maize | Do proper arrangement of drainage from the field of maize crops. |
| Uttar Pradesh | Gautam-Buddha-Nagar,Ghaziabad Hapur | Maize | Hybrid maize Ganga-2 Ganges-5 species, can be sown by if there is irrigation facility, then sowing can be done by June 15, otherwise you can sow maize by June 25. |

| | | | |
|---|---|---|---|
| Uttar Pradesh | Gorakhpur | Pigeon Pea (Red Gram/Arhar) | Farmers are advise to field preparation of pigeon pea and sowing on the rigged bed |
| Uttar Pradesh | Hamirpur,Jalaun | Pigeon Pea (Red Gram/Arhar) | Pigeon pea: Sowing of short duration variety viz; Paras, UPAS-120, Type-21 and Pusa 992 after 30 May. |
| | | Black Gram | Harvesting should be done as early as possible of green gram and black gram crop of zaid season. |
| Uttar Pradesh | Kannauj | Maize | Farmers are advice to keep the maize produce in the shadeand airy place for the three to four days, after that during open weather you my dryup the maize in the open place. shade place should be available near drying place as well as polythene also available for adverse weather condition |
| | | Green Gram | Urd/Moong crop has completed their life cycle, for the three days farmers are advice to keep the produce dry & airy place, Also polythene and shade should be available near processing place, that will helpful for adverse weather condition. |
| | | Groundnut | Almost groundnut crop ripened. So farmers are advice to Dig, clean & dry up timely. These days monsoon activating, so shade & polythene should be available near processing and dry up place. |
| Uttar Pradesh | Kaushambi,Pratapgarh | Groundnut | Apply 100 Kg Gypsum 3 week after sowing of groundnut. |
| Uttar Pradesh | Lalitpur,Mahoba | Pigeon Pea (Red Gram/Arhar) | Pigeon pea: Sowing of short duration variety viz; Paras, UPAS-120, Type-21 and Pusa 992 after 30 May. |
| | | Black Gram | Harvesting should be done as early as possible of green gram and black gram crop of zaid season. |
| Uttar Pradesh | Maharajganj,Shravasti,Gonda | Pigeon Pea (Red Gram/Arhar) | Sowing of pigenpea may be done in this week. Adequate moisture should be maintained for optimum germination of seeds. Farmers are advised to procure good quality seeds from certified sources. Before sowing pigeon pea, seeds should be treated with crop specific Rhizobium culture and Phosphate Solublesing Bacteria (PSB). |
| Uttar Pradesh | Mau,Mirzapur,Varanasi | Green Gram | As per weather forecast, there is a chance of cloudy weather and there may be moderate to heavy rains in coming days. During day time, wind speed will be above normal. So, in case of water stagnation, make proper drainage system in the field. Undertake picking of fruits and use green leaf and stalk for green manuring or as green fodder |
| Uttar Pradesh | Rae-Bareli,Sant-Kabir-Nagar | Maize | Do proper arrangement of drainage from the field of maize crops. |
| Uttar Pradesh | Sant Ravidas Nagar | Pigeon Pea (Red Gram/Arhar | Prabhas, Upas 120 in early maturing varieties of Arhar and Bahar Narendra Arhar-1, Rajendra Arhar-1 and Narendra two can be used in late maturing varieties. Arrange seed from certified source. Farmer brother should sow Arhar on the bunds when the weather is clear. |
| Uttar Pradesh | Shahjahanpur | Maize | Farmers should postpone the sowing of fodder crops like guar, maize, millet etc. for the next three days in view of the weather. |
| Uttar Pradesh | Sonbhadra | Pigeon Pea (Red Gram/Arhar) | In view of light to moderate rainfall in coming days stop for some days sowing of Pigeon pea. |

# ODISHA

The state has around 4.5 million ha under paddy cultivation, which covers both irrigated and rainfed areas.

## Kharif Major Crops

Maize and Ragi are the important coarse cereal crops. Jowar, Bajra and small millets are also grown in the state to a lesser extent. Arhar, mung, kulthi, biri, gram, fieldpea, cowpea and lentil are the pulse crops grown in the State. Pulses are grown mainly in uplands during Kharif season predominantly in inland districts.

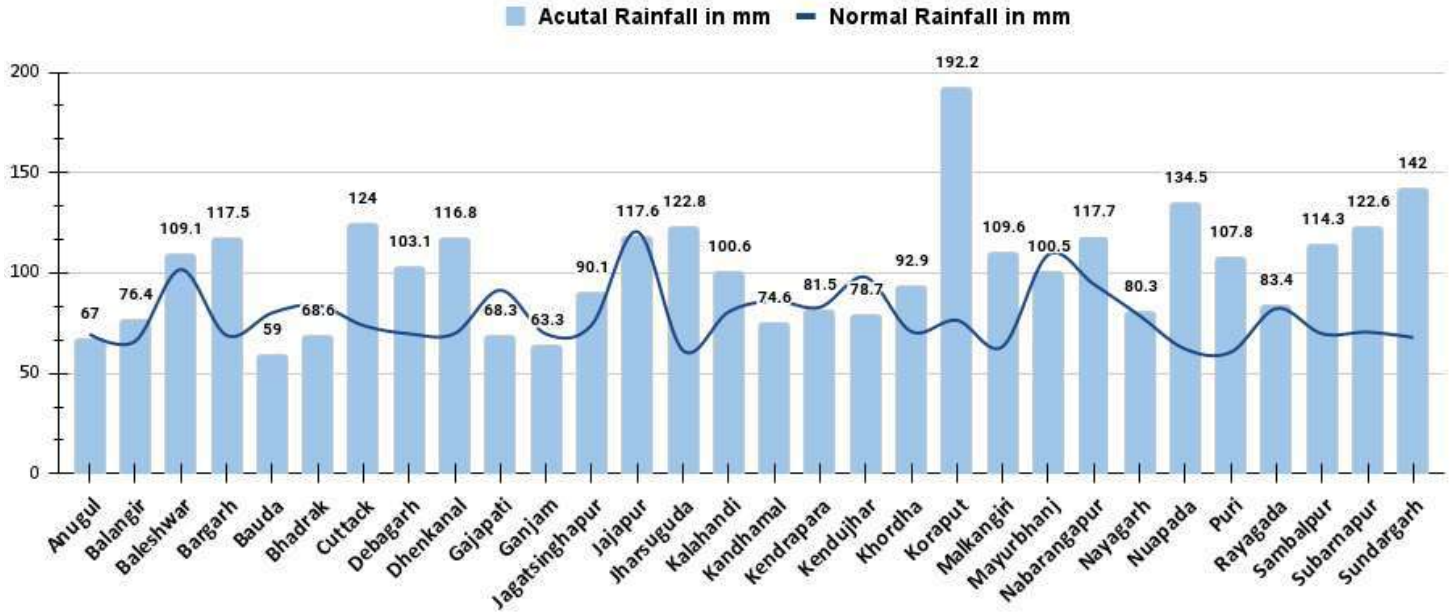
## Agro-Climatic Zones of Odisha

| Sr. No. | Agro-Climatic zone | Districts |
|---|---|---|
| 1 | East & South East Coastal Plain | Puri, Nayagarh, Khordha, Kendrapada, Jagatsinghpur, Cuttack |
| 2 | Eastern Ghat High Land | Nabarangpur, Koraput |
| 3 | Mid Central Table Land Zone | Dhenkanal, Angul |
| 4 | North Central Plateau | Mayurbhanj, Keonjhar |
| 5 | North Eastern Coastal Plain | Jajpur, Bhadrak, Baleshwar |
| 6 | North Eastern Ghat | Rayagada, Kandhamal, Ganjam, Gajapati |
| 7 | North Western Plateau Zone | Sundargarh, Deogarh |
| 8 | South Eastern Ghat | Malkangiri |
| 9 | West Undulating Zone | Nuapada, Kalahandi |
| 10 | Western Central Table Land Zone | Subarnapur, Sambalpur, Jharsuguda, Boudh, Bargarh, Balangir |

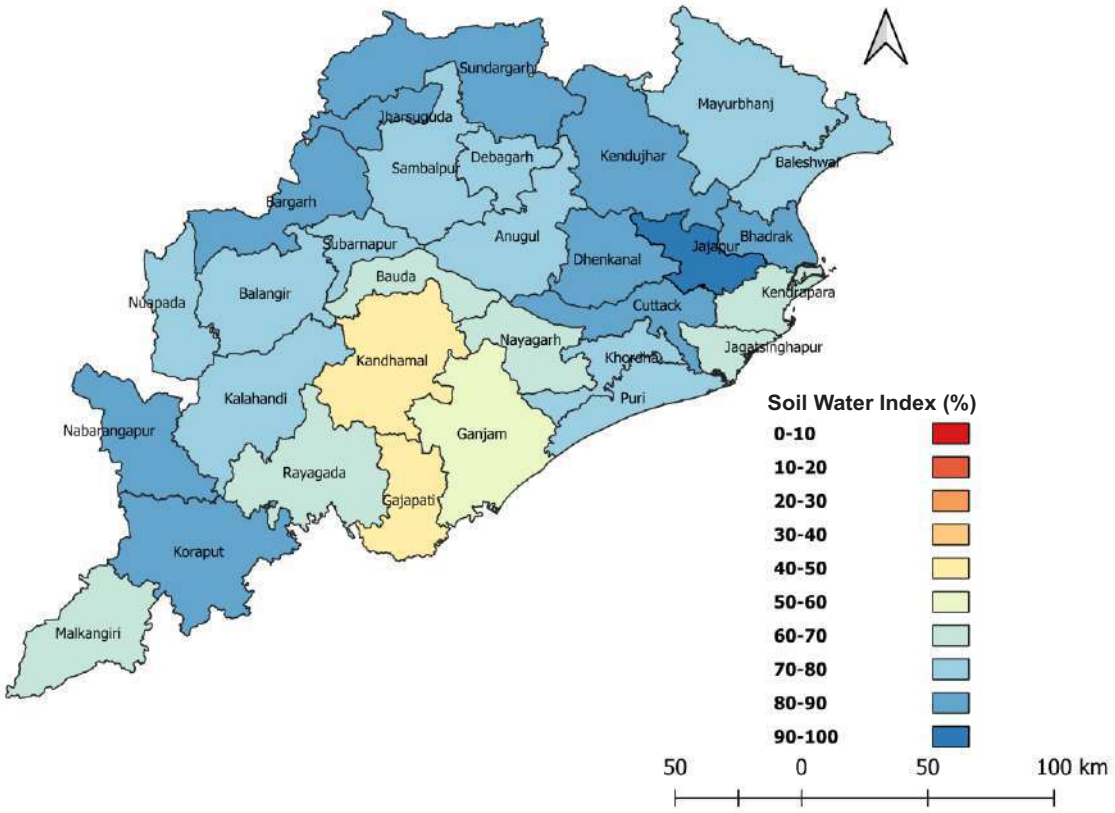
## Reservoir Storage Status

| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | | LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) | | |
| HIRAKUD | 192.02 | 5.378 | 182.88 | 0.698 | 185.27 | 1.439 | 27 | 49 |
| BALIMELA | 462.08 | 2.676 | 466.29 | 0.577 | 446.04 | 0.556 | 21 | 104 |
| SALANADI | 82.3 | 0.558 | 70.95 | 0.236 | 74.15 | 0.313 | 56 | 75 |
| RENGALI | 123.5 | 3.432 | 112.20 | 0.414 | 111.38 | 0.264 | 8 | 157 |
| MACHKUND(JALAPUT) | 838.16 | 0.893 | 828.42 | 0.274 | 828.87 | 0.292 | 33 | 94 |
| UPPER KOLAB | 858 | 0.935 | 846.32 | 0.097 | 849.06 | 0.231 | 25 | 42 |
| UPPER INDRAVATI | 642 | 1.456 | 630.41 | 0.368 | 632.12 | 0.509 | 35 | 72 |
| SAPUA | 168.5 | 0.006 | 167.61 | 0.006 | 168.50 | 0.006 | 100 | 100 |
| HARIHARJHOR | 147.5 | 0.059 | 141.00 | 0.000 | 144.54 | 0.035 | 59 | 0 |
| MANDIRA DAM | 210.31 | 0.309 | 206.80 | 0.188 | 208.64 | 0.255 | 83 | 74 |

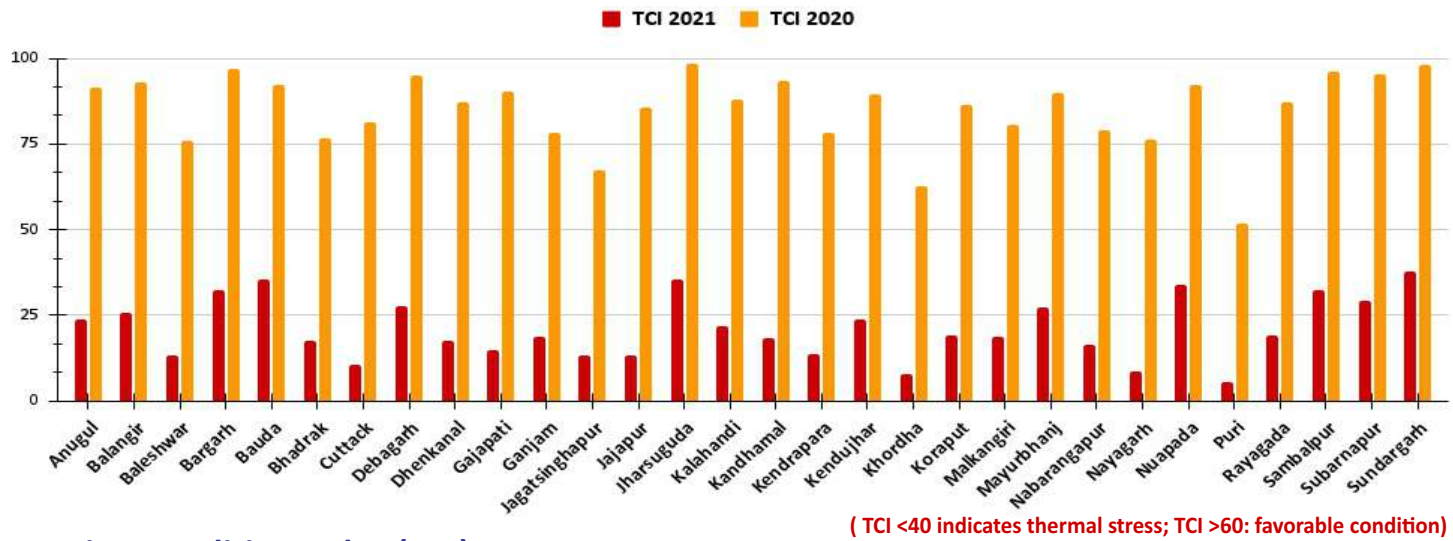
## Rainfall




## Soil Water Index

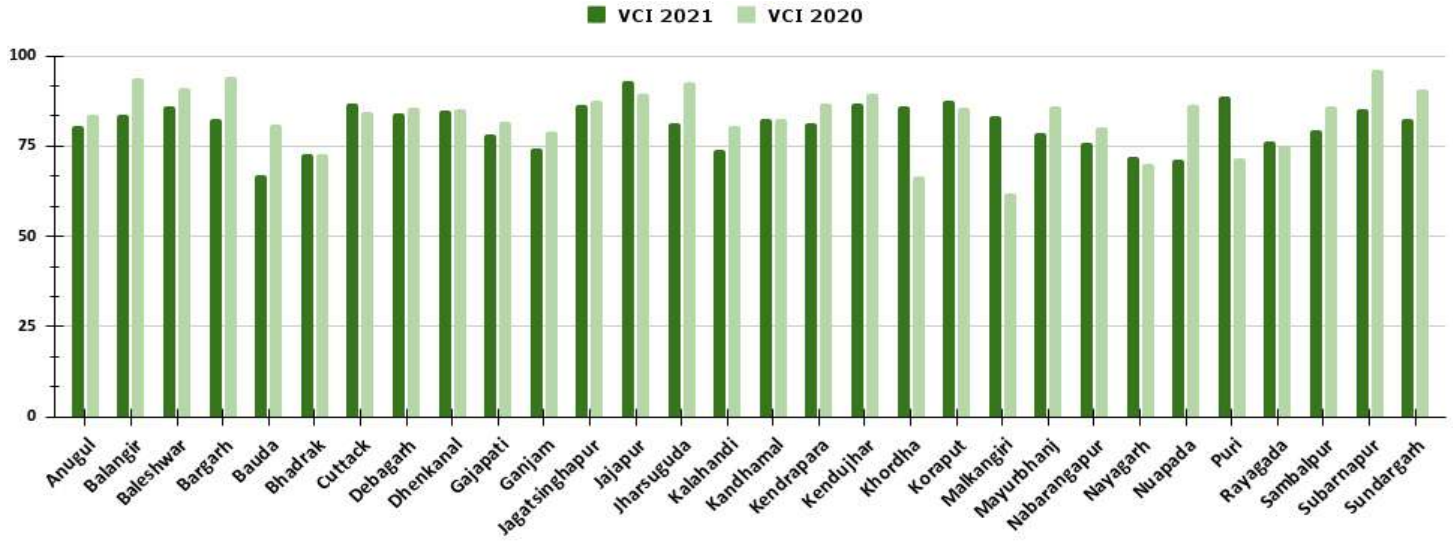


## Temperature Condition Index (TCI)



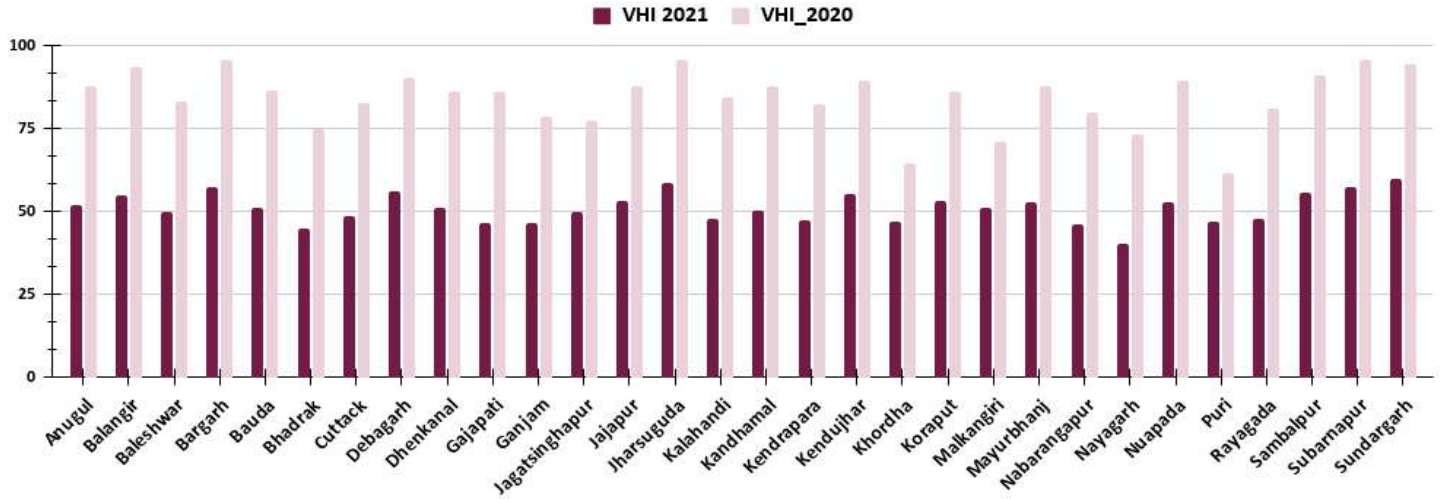

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Smoothed Normalized Difference Vegetation Index (SMN)


## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Odisha | Balangir,Mayurbhanj | Pigeon Pea (Red Gram/Arhar) | PRG - 235, PRG 176, VLARHAR1,T-Arhar etc are some improved varietis of Arhar.If line sowing is done in the field, the recommended seed rate for early and late maturing varieties is 8 and 6 kg/acre.Seed treatment can be done with Carbendazim 50 % WP @ 2-gram/ kg of seeds or Carboxin 37.5 % + Thiram 37.5% D.S WP (Vitavax power/Vaccinator Power. Treat the seeds with recommended species of Rhizobium bacterial culture @ 20 gram/kg of seeds before 1 hour of sowing. The gap between chemical seed treatment and Rhizobium treatment should be at least 7 days. |
| Odisha | Bargarh,Boudh, Sambalpur,Sonepur | Maize | Farmers are advised to prepare fields for maize cultivation. Hybrids like Ganga -5, Deccan-103, KH-510; composites like Shakti-1, Navjot etc. may be sown at a seed rate of 20kg/ha with a row to row spacing of 45-60cm and plant to plant spacing of 20cm. Apply a fertilizer dose of 60-30-30 NPK/acre. |
| Odisha | Deogarh | Cotton | Cotton : Try to complete the sowing work of cotton seeds in during the month of June. At the timing of sowing of cotton take as green vitamin of 8 to 10 kg as main seeds in one ecar. Maintain the gap in Row to row 90cm & tree to tree 60cm. In the case of Shankar or hybrid seeds it has to take gap 90cm in row to row. Sowing 2 nos of seeds of each bush in 4 to 5cm deep then covered it by soil. Applying 52 kg of DAP 7kg of yuriya & 20kg patas in one ecar. |
| | | Rice | Paddy: There are many varities which cultivates in high or middle highest field in during the period from 100 to 120 days that varities are Khandagiri,Shabhagi paddy,DRR-42,DRR-44,DRR-46,Mandakini,Nabeen,M.T.U-1010,G.B-1,Beena11,Satyabhama & Swarna Shreya etc. It needs 20Kg in each ekar for showing rows |
| | | Maize | Maize- Carbendajim 50% is tester for maize.It needs the quantity 1.5gm of each kg. of seeds. |
| Odisha | Dhenkanal | Maize | To control fall army worm in maize spray emamectin benzoate (5% S.G.) @ 0.4g per litre of water. |
| Odisha | Gajapati | Pigeon Pea (Red Gram/Arhar) | PRG-235, PRG 176, VL ARHAR1, T-Arhar etc are some improved varieties of Arhar. If line sowing is done in the field, the recommended seed rate for early and late maturing varieties is 8 and 6 kg/acre.Seed treatment can be done with Carbendazim 50 % WP @ 2-gram/ kg of seeds or Carboxin 37.5 % + Thiram 37.5% D.S WP (Vitavax power/Vaccinator Power. Treat the seeds with recommended species of Rhizobium bacterial culture @ 20 gram/kg of seeds before 1 hour of sowing. The gap between chemical seed treatment and Rhizobium treatment should be at least 7 days |
| | | Maize | Weeds in Maize can be controlled, by spraying Atrazine 50 % W.P (Atrazine/Dhanuzin/Atratop) herbicide @ 800- gram/acre by mixing it in 200 litres of water within 1-3 DAS. |
| | | Cotton | After monsoon rain fall go for ploughing. Plough the field with mould board plough or disc plough for deep ploughing. Keep the field clean. Apply 2 tonne of compost during last ploughing. Purchase suitable hybrid seeds and fertilizers from licenced dealer. Avoid growing longer duration hybrids in Rainfed area. |

| | | | |
|---|---|---|---|
| Odisha | Ganjam | Pigeon Pea (Red Gram/Arhar) | In early duration varieties, row to row distance should be maintained at 60cms, and plant to plant distance at 15cms. Arhar should be sown after seed treatment with Rhizobium culture @ 20 grams and PSB @ 10 grams per kg. seed. |
| | | Maize | As the weather is favorable farmers can go for sowing of maize at optimum moisture condition. Before sowing seeds should be treated with chemicals like Cyantraniliprole 19.8% + Thiamethoxam 19.8% FS @ 4 ml per kg of seed. Avoid irrigation in standing crops. |
| Odisha | Jagatsinghpur | Paddy | Upland rice varieties (Matures in 100-120 days) like Khandagiri, Sahabhagi Dhan, DRR-42, DRR-44, DRR-46, Mandakini, Naveen, GB-1, Bina-11, MTU-1010, Satyabhama, Swarna Shreya etc. can be cultivated. • Medium land rice varieties (Matures in 120-140 days) like MTU 1156, MTU 1153, CR Dhan 310, RGL 2538, Lalat, Improved Lalat, Manaswini, MTU-1001, Sampada, Gitanjali, Nua acharmati etc can be cultivated. • Low land rice varieties (Matures >140 days) like Pratikshya, Swarna, Swarna Sub-1, RGL-2537, MTU-1075, Mrinalini, Hashanta, Rani Dhan, CR 1009, CR 1009 Sub-1, DRR 50, Pooja, MTU-1064, CR-1018, Sarala, Durga, Pradhan Dhan, Nua Kalajeera, Nua chinikamini, CR Sungadhi Dhan-907 etc can be cultivated. • Before sowing, seed treatment can be done with Carbendazim 50 % WP (Dhanustin/Bavistin) @ 2- gram/ kg of seeds or Carboxin 37.5 % + Thiram 37.5% D.S WP (Vitavax power) or thiram 75 % WS @ 3 gm/kg of seeds. |
| | | Groundnut | Use suitable variety of Groundnut like Devi (ICGV-91114), Kadri-6, Kadri-9, TG-37A, TAG-51, TAG-38, TAG-24, Smruti, CO-7, Dharani etc. • Treat the seeds with recommended species of Rhizobium bacterial culture @ 20 gm/kg of seeds before 1 hour of sowing. |
| Odisha | Jharsuguda | Maize | Farmers are advised to prepare fields for maize cultivation. Hybrids like Ganga -5, Deccan-103, KH-510; composites like Shakti-1, Navjot etc. may be sown at a seed rate of 20kg/ha with a row to row spacing of 45-60cm and plant to plant spacing of 20cm. Apply a fertilizer dose of 60-30-30 NPK/acre |
| Odisha | Kalahandi | Paddy | Start land preparation for direct sowing and nursery sowing for transplanting taking the advantage of monsoon rain. Collect the certified seeds of paddy like Khandagiri, Sahabhagi, Jyotirmayee, Mandakini, etc. for upland, Lalat, MTU1010,Naveen, MTU-1001, Pratibha, Pradeep , Hiranmayee, Tejaswini for medium land and MTU-7029, Pooja, Pratikshya Hasant, Mrunlalini, Ashutosh etc for low land situation @ 20kg/acre. |
| | | | Start land preparation for nursery sowing of paddy. Sow the pre-germinated seeds in seed beds of 1m breadth and 15cm height with convenient length as per availability. Keep drainage channels in between the beds to facilitate the water management. An area of 400sq. m. is sufficient for sowing 20kg seed per acre to raise seedlings for 1acre transplanting. |
| | | | Start sowing direct seeding of rice by seed drill. Apply 35kg DAP and 10kg MOP before sowing. |
| | | Cotton | Start land preparation for sowing cotton taking the advantage of rain. The HYV cotton varieties are Suraj, Supriya, Surabhi and seed rate is 1.4kg/acre. Collect the hybrids like Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat etc @500g/acre. For high density Planting system(HDPS) the seed rate is 5kg/acre and varieties suitable are Suraj and Supriya. |
| Odisha | Kendrapada,Khordha Puri | Paddy | Upland rice varieties (Matures in 100-120 days) like Khandagiri, Sahabhagi Dhan, DRR-42, DRR-44, DRR-46, Mandakini, Naveen, GB-1, Bina-11, MTU-1010, Satyabhama, Swarna Shreya etc. can be cultivated |
| | | | Medium land rice varieties (Matures in 120-140 days) like MTU 1156, MTU 1153, CR Dhan 310, RGL 2538, Lalat, Improved Lalat, Manaswini, MTU-1001, Sampada, Gitanjali, Nua acharmati etc can be cultivated |
| | | | Low land rice varieties (Matures >140 days) like Pratikshya, Swarna, Swarna Sub-1, RGL-2537, MTU-1075, Mrinalini, Hashanta, Rani Dhan, CR 1009, CR 1009 Sub-1, DRR 50, Pooja, MTU-1064, CR-1018, Sarala, Durga, Pradhan Dhan, Nua Kalajeera, Nua chinikamini, CR Sungadhi Dhan-907 etc can be cultivated. |
| | | | Before sowing, seed treatment can be done with Carbendazim 50 % WP (Dhanustin/Bavistin) @ 2- gram/ kg of seeds or Carboxin 37.5 % + Thiram 37.5% D.S WP (Vitavax power) or thiram 75 % WS @ 3 gm/kg of seeds. |
| | | Groundnut | Use suitable variety of Groundnut like Devi (ICGV-91114), Kadri-6, Kadri-9, TG-37A, TAG-51, TAG-38, TAG-24, Smruti, CO-7, Dharani etc. |
| | | | Treat the seeds with recommended species of Rhizobium bacterial culture @ 20 gm/kg of seeds before 1 hour of sowing |

| | | | |
|---|---|---|---|
| Odisha | Kendujhar | Groundnut | The weather is optimum for for sowing of groundnut Grow High yielding varieties Ak-12-24 for direct eating as nuts and Smruti for oil. Use 40 kg shelled kernel/acre (60 kg unshelled nuts). Before sowing seeds are to betreated with 2 g Bavistin/kg Treat the seeds with the Rhizobium culture @ 600 culture/acre 7 days after fungicidal treatment. Apply 8:16:16 kg NPK/acre during final land preparation as basal. Phosphorous should be applied in form of SSP other wise apply 75-100 kg Gypsum/acre along with the basal. Sow the seeds in line 30 cm apart with 10 cm plant to plant distance |
| Odisha | Malkangiri | Maize | This is the optimum time for sowing of maize. After receipt of rainfall, sow the maize seeds with a spacing of 60 x 20-25 cm using 6 kg seeds/acre. At the sowing time apply 35 kg DAP, 4 kg urea and 27 kg MoP per acre. |
| Odisha | Nabarangpur | Maize | To control fall army worm spray Thiamethoxam 12.6% + Lambda cyhalothrin 9.5% EC @ 0.5 ml/litre of water or Emamectin benzoate 5% SG @ 0.4 g/litre of water. |
| Odisha | Nayagarh | Pigeon Pea (Red Gram/Arhar) | Treat the arhar seeds with Carboxin 37.5% + Thiram 37.5% DS (Vitavax Power) @ 2 gm per kg of seeds for 10 hours before sowing. |
| Odisha | Nuapara | Paddy | Start land preparation for direct sowing and nursery sowing for transplanting taking the advantage of monsoon rain. Collect the certified seeds of paddy like Khandagiri, Sahabhagi, Jyotirmayee, Mandakini, etc. for upland, Lalat, MTU1010,Naveen, MTU-1001, Pratibha, Pradeep , Hiranmayee, Tejaswini for medium land and MTU-7029, Pooja, Pratikshya Hasant, Mrunlalini, Ashutosh etc for low land situation @ 20kg/acre |
| | | | Start land preparation for nursery sowing of paddy. Sow the pre-germinated seeds in seed beds of 1m breadth and 15cm height with convenient length as per availability. Keep drainage channels in between the beds to facilitate the water management. An area of 400sq. m. is sufficient for sowing 20kg seed per acre to raise seedlings for 1acre transplanting. 3. Start sowing direct seeding of rice by seed drill. Apply 35kg DAP and 10kg MOP before sowing. |
| | | Cotton | Start land preparation for sowing cotton taking the advantage of rain. The HYV cotton varieties are Suraj, Supriya, Surabhi and seed rate is 1.4kg/acre. Collect the hybrids like Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat etc @500g/acre. For high density Planting system(HDPS) the seed rate is 5kg/acre and varieties suitable are Suraj and Supriya. |
| | | Maize | Start land preparation for sowing cotton taking the advantage of rain. Collect maize varieties Shakti-1, Navjot etc @6kg/acre and hybrids like Megan-G, Megan, MM-1107,Highshell, Prabal, Proagro 4643, Bio9681, Pinnacle, DMH-7705 @ 8kg/acre. |
| | | Maize | Farmers are advised to prepare fields for maize cultivation. Hybrids like Ganga -5, Deccan-103, KH-510; composites like Shakti-1, Navjot etc. may be sown at a seed rate of 20kg/ha with a row to row spacing of 45-60cm and plant to plant spacing of 20cm. Apply a fertilizer dose of 60-30-30 NPK/acre. |
| Odisha | Sunadagarh | Cotton | Cotton : Try to complete the sowing work of cotton seeds in during the month of June. At the timing of sowing of cotton take as green vitamin of 8 to 10 kg as main seeds in one ecar. Maintain the gap in Row to row 90cm & tree to tree 60cm. In the case of Shankar or hybrid seeds it has to take gap 90cm in row to row. Sowing 2 nos of seeds of each bush in 4 to 5cm deep then covered it by soil. Applying 52 kg of DAP 7kg of yuriya & 20kg patas in one ecar. |
| | | Maize | Maize- Carbendajim 50% is tester for maize.It needs the quantity 1.5gm of each kg. of seeds. |

# West Bengal

The cultivated area of the state is 5.5 million ha comprising 62% of the total geographical area. About 54% of cultivated area is irrigated and the cropping intensity is high at 176%.

## Kharif Major Crops

Rice is the most important kharif crop, which presently accounts for 77% of the total rice area and 68% of total area under food grains in the State. In addition, wheat, pulses, mustard, groundnut, jute, sugarcane, potato, fruits, vegetables and flowers are cultivated.

## Agro-Climatic Zones of West Bengal

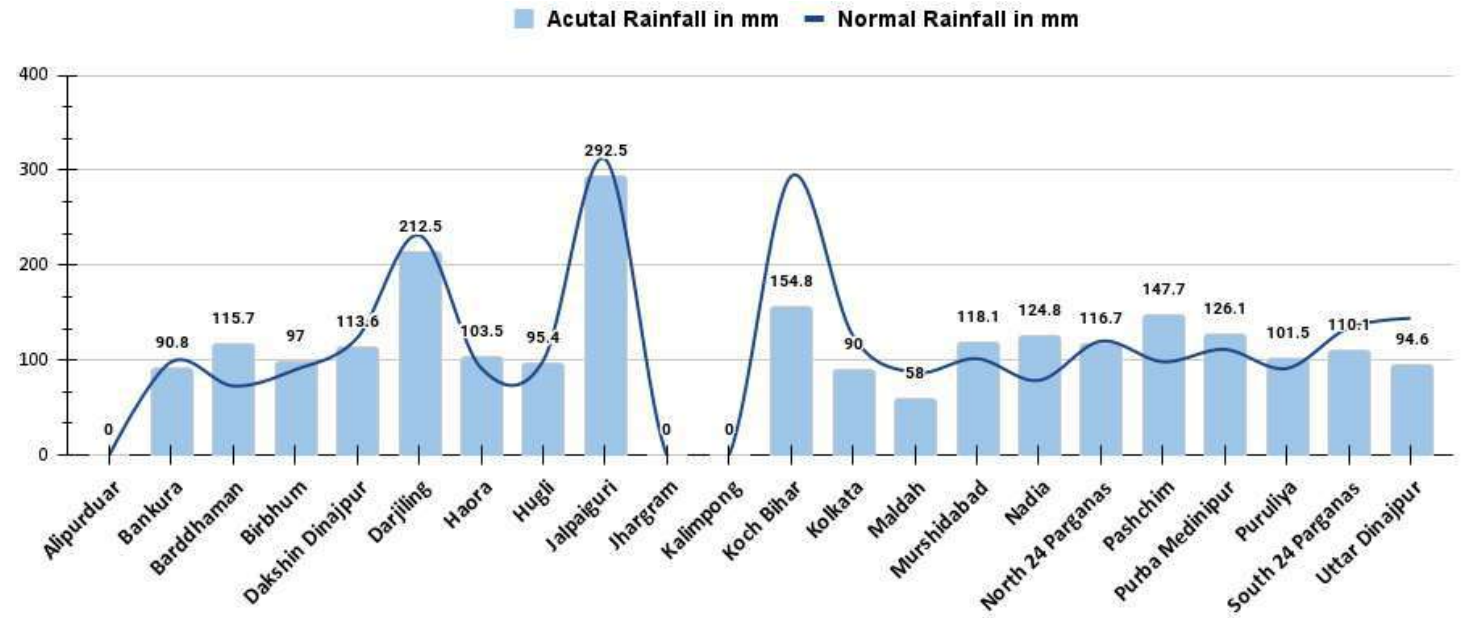
| Sr No. | Agro-Climatic Regions | District |
|---|---|---|
| 1 | Northan Hill Zone (Eastern Himalayan Region) | Part of Darjeeling & Jalpaiguri |
| 2 | Teesta-Tarai Alluvial Zone (Eastern Himalayan Region) | Koch Bihar, Part of Darjeeling, Jalpaiguri & Uttar Dinajpur |
| 3 | Gangetic Alluvial Zone (Lower Gangetic Plain Region) | Dakshin Dinajpur, Malda, Nadia, Part of Uttar Dinajpur, Murshidabad,North 24 Paranganas, South 24 Paranganas, Howrah, Hoogly & Birbhum |
| 4 | Vindhyan Alluvial Zone (Lower Gangetic Plain Region) | Part of Murshidabad, Howrah, Hoogly, Burdwan, Birbhum, Bankura, Paschim & Purba Medinipur |
| 5 | Coastal Saline Zone (Lower Gangetic Plain Region) | Part of North 24 Paranganas, South 24 Paranganas, Howrah & Purba Medinipur |
| 6 | Red & Laterite Zone (Eastern Plateau & Hill Region) | Puruliya, Part of Burdwan, Birbhum, Bankura & Paschim Medinipur |

## Reservoir Storage Status

| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| MAYURAKSHI | 121.31 | 0.48 | 112.24 | 0.128 | 114.16 | 0.180 |
| KANGSABATI | 134.14 | 0.914 | 125.93 | 0.317 | 128.06 | 0.434 |

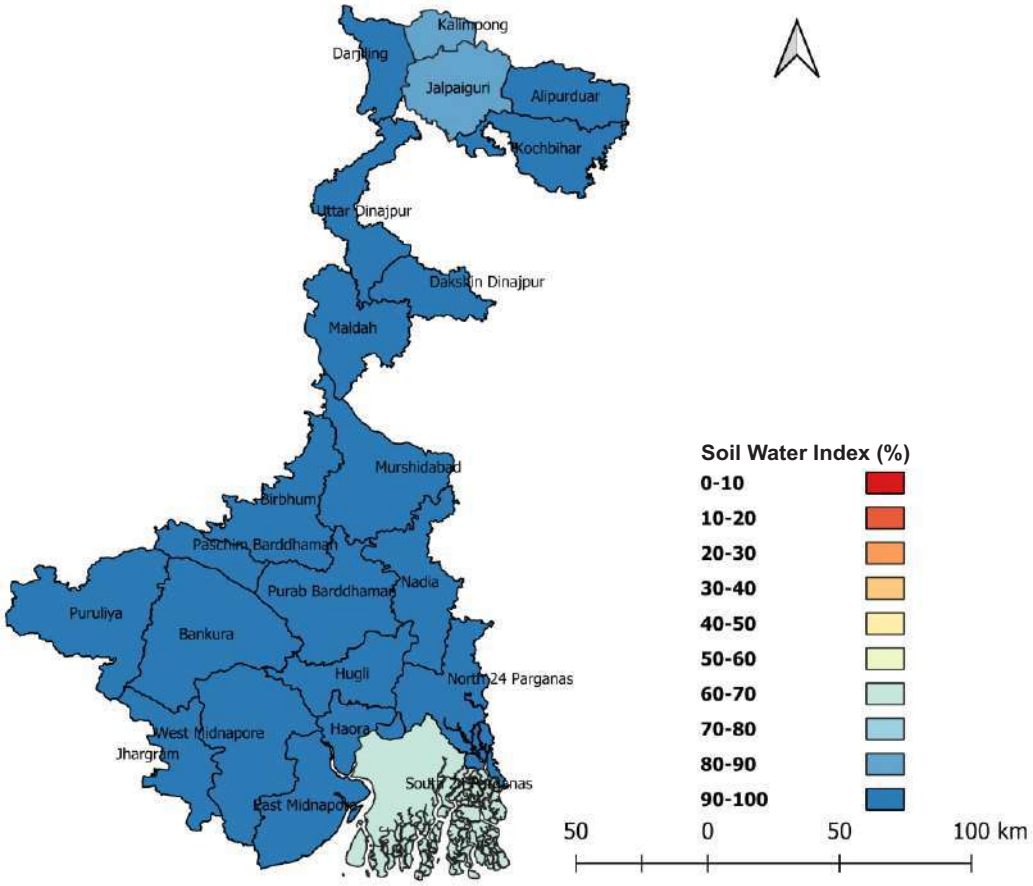
| LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|
| 38 | 71 |
| 47 | 73 |

## Rainfall

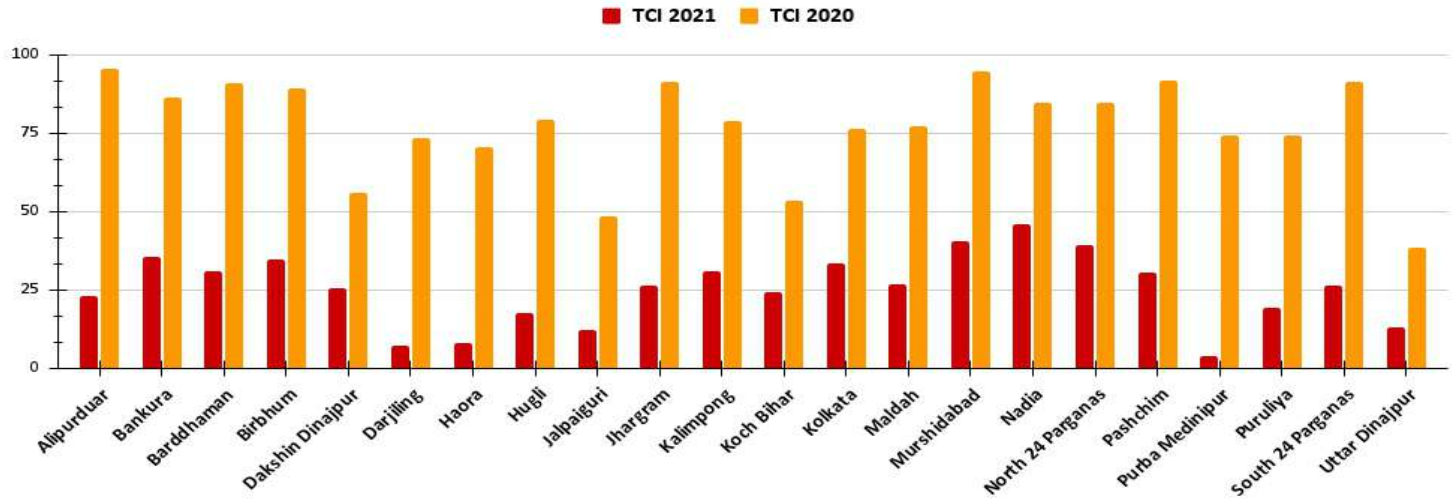


## Smoothed Normalized Difference Vegetation Index (SMN)


## Soil Water Index

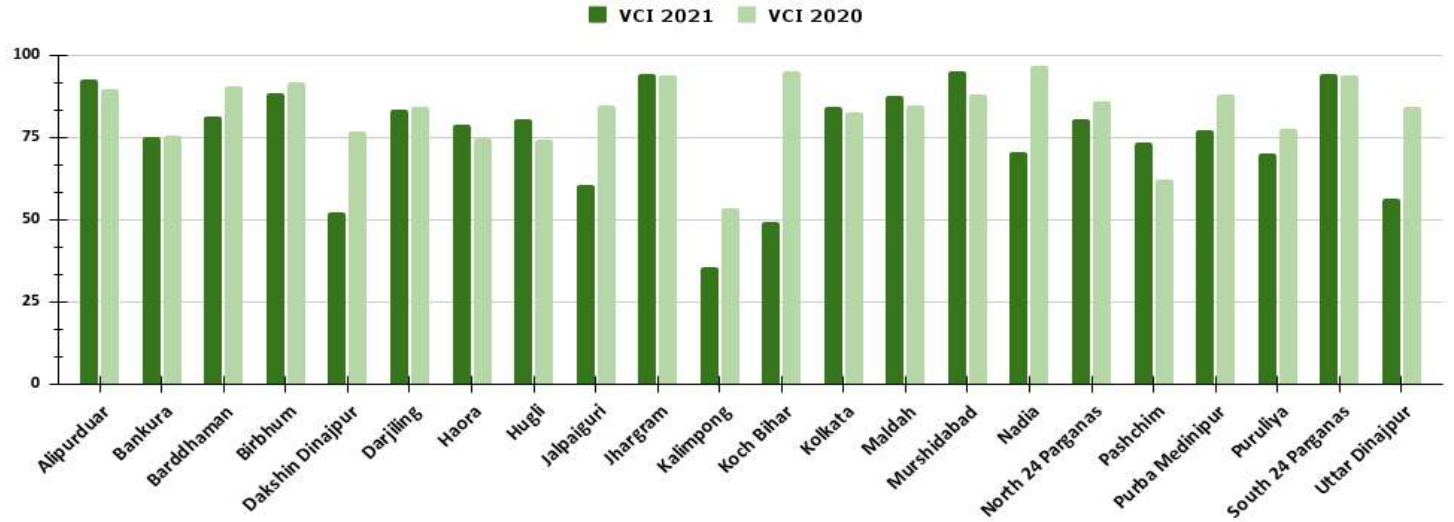


## Temperature Condition Index (TCI)



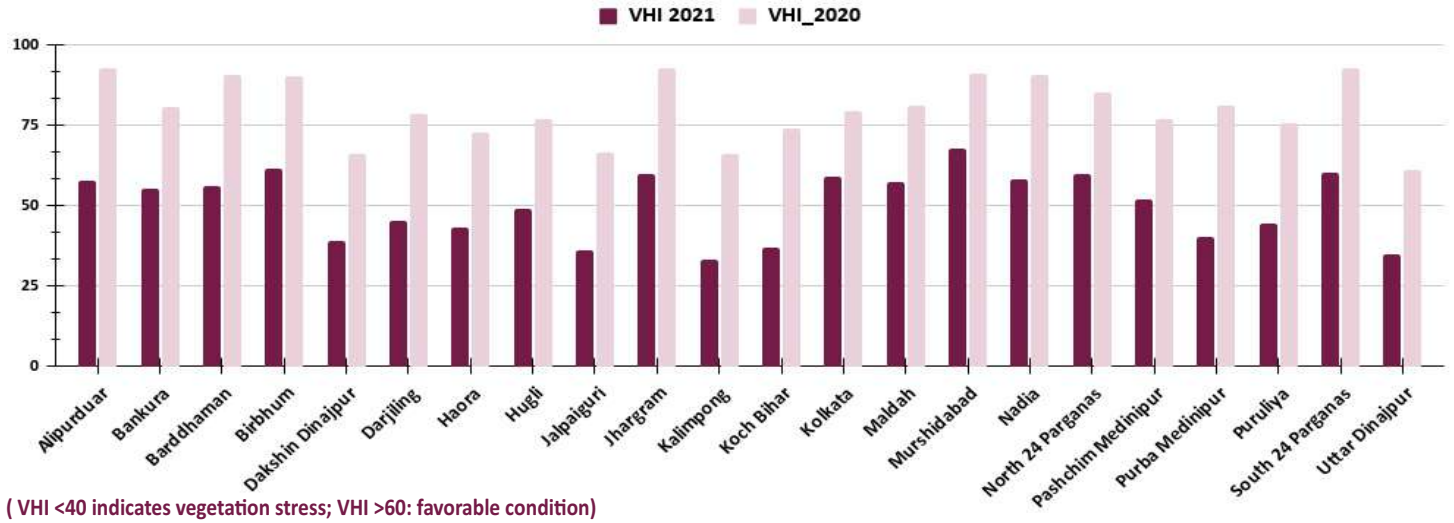

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| West Bengal | Alipurduar,Dinajpur-Uttar,Coochbehar | Green Gram | To control the sucking pest Acephate 25% + Fenvelerate 3% @ 1.5g/lit. Of water in the plant at evening hour may be sprayed. |
| West Bengal | Bankura,Paschim Medinipur,Purulia | Groundnut | Collect good quality certified seeds for sowing of Kharif Groundnut. Recommended verities are TAG-24, TG-37A, ICGS-76. Treat the seeds with systemic fungicides before sowing |
| West Bengal | Dinajpur-Dakshin | Green Gram | To control the sucking pest Acephate 25% + Fenvelerate 3% @ 1.5g/lit. Of water in the plant at evening hour may be sprayed. Harvest the crop if crop attains 80% maturity. |
| West Bengal | Darjeeling,Kalimpong | Soybean | Prepare the land to get fine tilth and form beds and channels. One deep ploughing followed by 2-3 cross ploughing and laddering is necessary to obtain good tilth. Soils acidic in nature require lime application. Apply lime @ 2.0 – 2.5 kg per decimal (500 kg ha-1 ) in furrows and mix thoroughly with the soil just before sowing. |
| | | | SEED RATE: 200-210 gram per decimal (50 kg seed ha-1 ): SPACING: 45 cm row to row and 10 cm plant to plant: DEPTH OF SOWING: 3-5 cm: SEED TREATMENT RATE: Treat the healthy seed with Thiram @ 4-4.5 g per kg of seed or with the mixture of Thiram (1.5 g) + Bavistin (1.5g) per kg of seed before sowing to control seed borne diseases. |
| | | | MANURE & FERTILIZER MANAGEMENT: Add well decomposed cow manure/FYM/compost @ 25 – 35 kg per decimal at the first ploughing and incorporate into the soil thoroughly. Apply the following quantities of chemical fertilizers, Urea: 175 g per decimal: SSP: 1.50 kg per decimal: MOP: 200 g per decimal. (N: P: K @ 20 60: 30 kg ha-1 ). Mix thoroughly the above dose of fertilizers and apply in furrows and mix well with the soil. |
| | | Maize | Avoid weeding and other intercultural operations during the tasseling stage. Follow 50% de-tasseling operation (removing 50% of male inflorescence) in maize to obtain a higher yield. |
| West Bengal | Jhargram | Groundnut | Collect good quality certified seeds for sowing of Kharif Groundnut. Recommended verities are TAG-24, TG-37A, ICGS-76. Treat the seeds with systemic fungicides before sowing. |
| West Bengal | Purba-Bardhaman | Groundnut | Oilseeds like Groundnut, pulses like green gram remain in ripening stage in field should be immediately harvested and kept in a safe place for storage after threshing. For late sown crops, remove the stagnant water from the field quickly. spray Bavistin and Mancozeb @ 2.5 g/1 in clean sunny weather at early morning hours.To prevent collar rot disease application of Propiconazole @ 1m1/ liter of water may be recommended. In some cases if Tobacco caterpillar attacks then apply Neem oil (2%) @ 20ml/ liter of water or spray Imidacloprid 17.8% SL @ 100-125 ml/ha. |

# Uttarakhand

The net area sown is 76,5150 hectare. The percentage of net irrigated sown area is 45.1%.

## Kharif Major Crops

The main crops are wheat, paddy, maize, manduwa and sanwa in food grains, urad, gram, pea, masoor & rajma in pulses and mustard, soybean, groundnut in oil seeds. The influence of the monsoon on the cropping pattern is very dominant; with the result of the total cropped area about 70 to 75% is under 'Kharif' season crops. The highest sown area is under wheat crop (34.79%) followed by rice with 24.3%. Mandua, a traditional millet crop has 15.1% sown area, while the area under pulses is 4.61%. Rest of the area is under other millets including koni, jhangora, jowar, bajara, maize and oilseeds.

## Agro-Climatic Zones of Uttarakhand

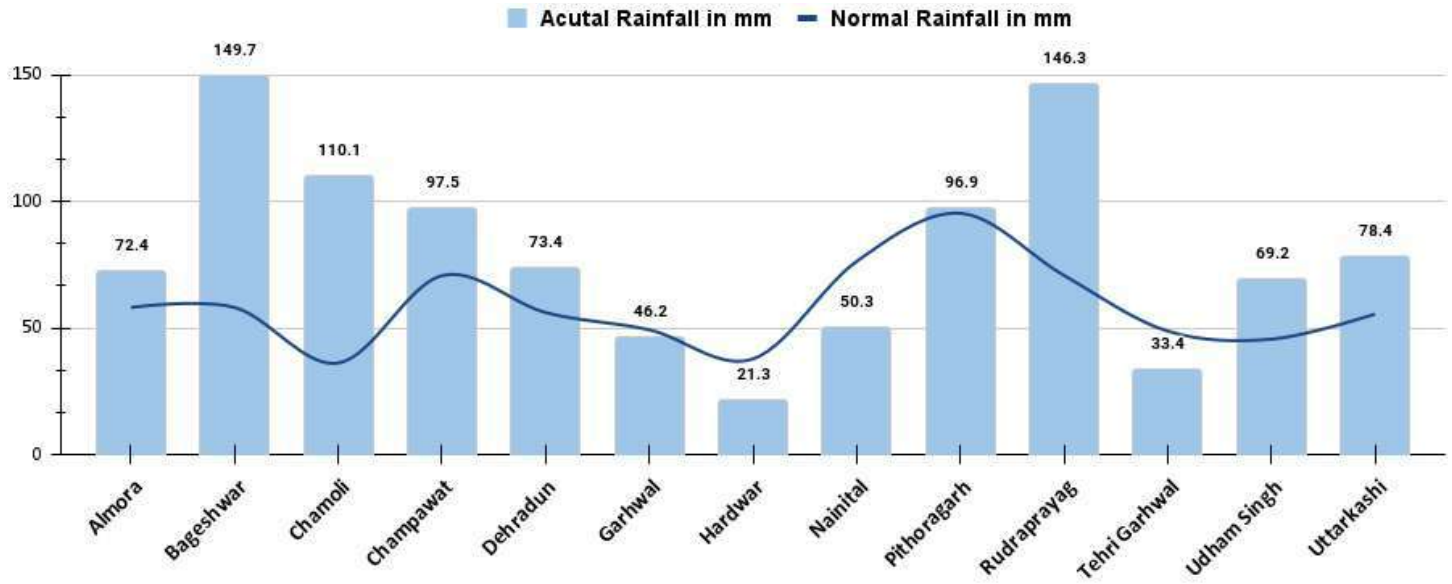
| Sr. No. | Agro-Climatic Regions | District |
|---|---|---|
| 1 | Zone A up to 1000 M | U.S. Nagar, Haridwar |
| | | Nainital, Dehradun and Pauri Garhwal |
| | | Champawat, Pauri Garhwal, Dehradun, Nainital, Tehri Garhwal |
| | | Champawat, Nainital, Pauri Garhwal, Dehradun, Tehri Garhwal, Bageshwar |
| 2 | Zone B 1000-1500M | Champawat, Nainital, Almora, Dehradun, Tehri Garhwal, Bageshwar |
| 3 | Zone C 1500-2400M | Pithoragarh, Almora, Chamoli, Bageshwar |
| 4 | Zone D>2400 M | Pithoragarh, Chamoli and Uttarkashi |

## Reservoir Storage Status

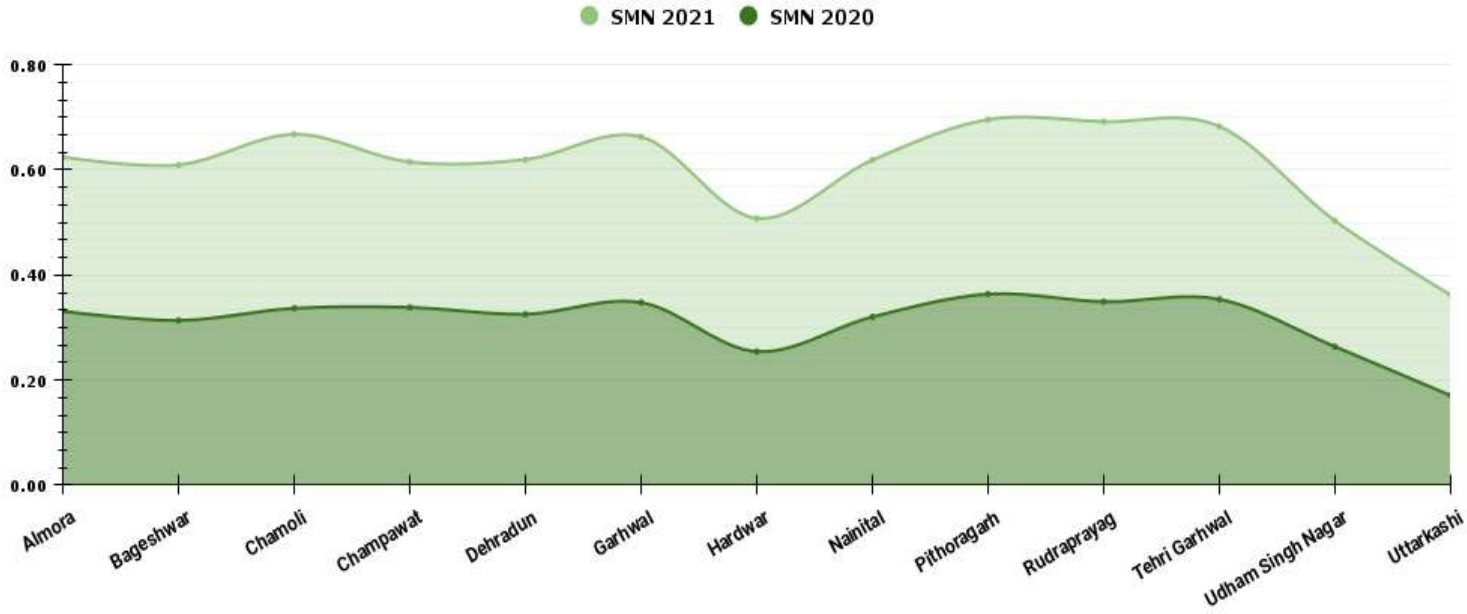
| NAME OF RESERVOIR | FRL (MTS) | LIVE CAP. AT FRL (BCM) | THIS SEASON | | LAST SEASON | |
|---|---|---|---|---|---|---|
| | | | LEVEL ( MTS) | LIVE STORAGE (BCM) | LEVEL (MTS) | LIVE STORAGE (BCM) |
| RAMGANGA | 365.3 | 2.196 | 337.53 | 0.615 | 349.78 | 1.165 |
| TEHRI | 830 | 2.615 | 745.90 | 0.103 | 746.33 | 0.111 |

| LAST YEAR STORAGE AS % OF LIVE CAP AT FRL | % OF THIS YR STORAGE TO LAST |
|---|---|
| 53 | 53 |
| 4 | 93 |

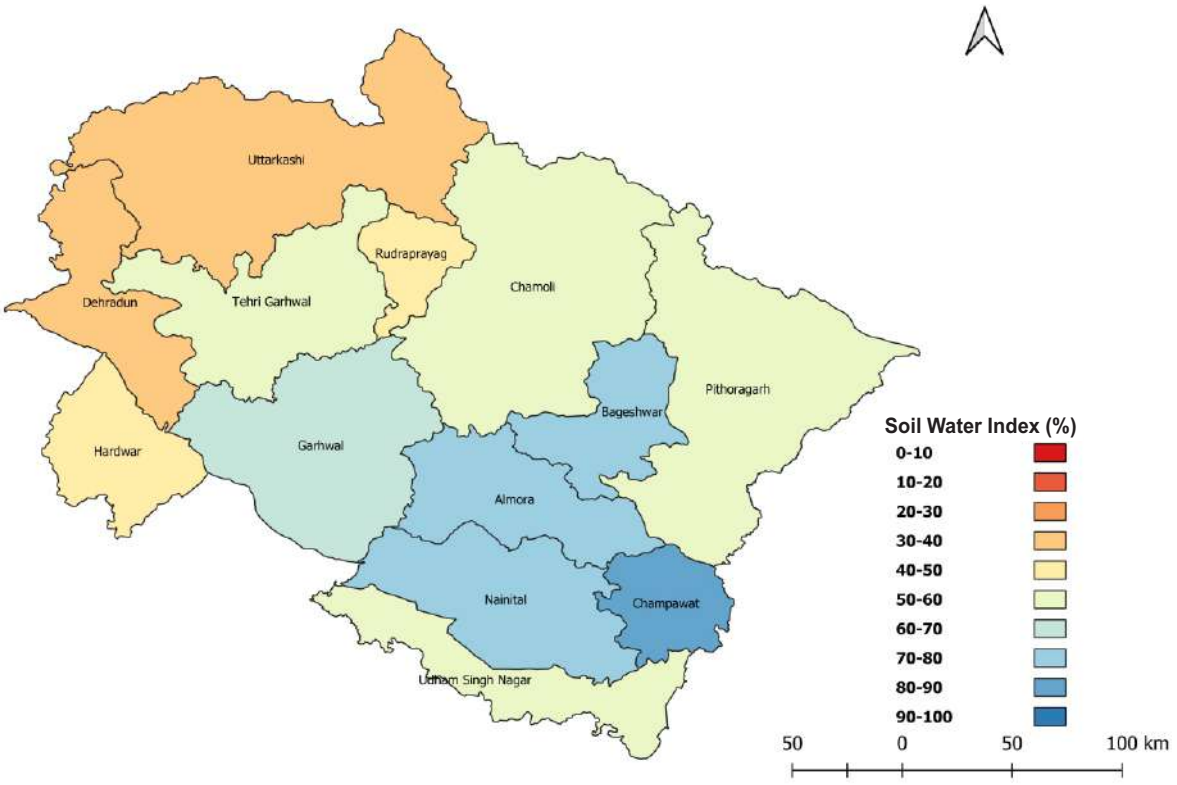
## Rainfall



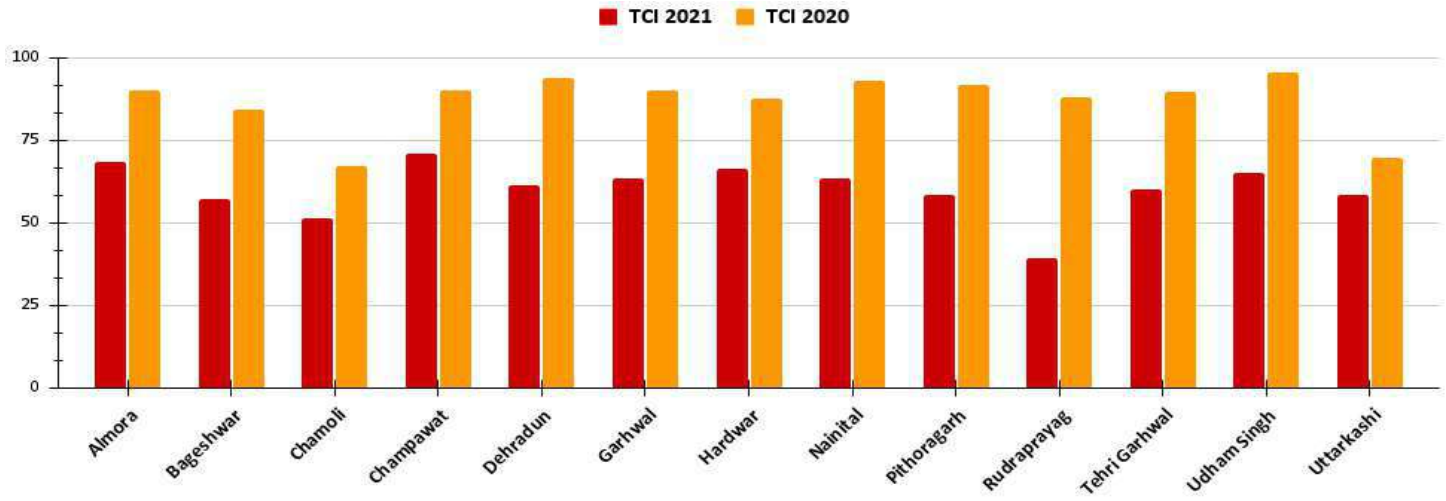
## Smoothed Normalized Difference Vegetation Index (SMN)




## Soil Water Index

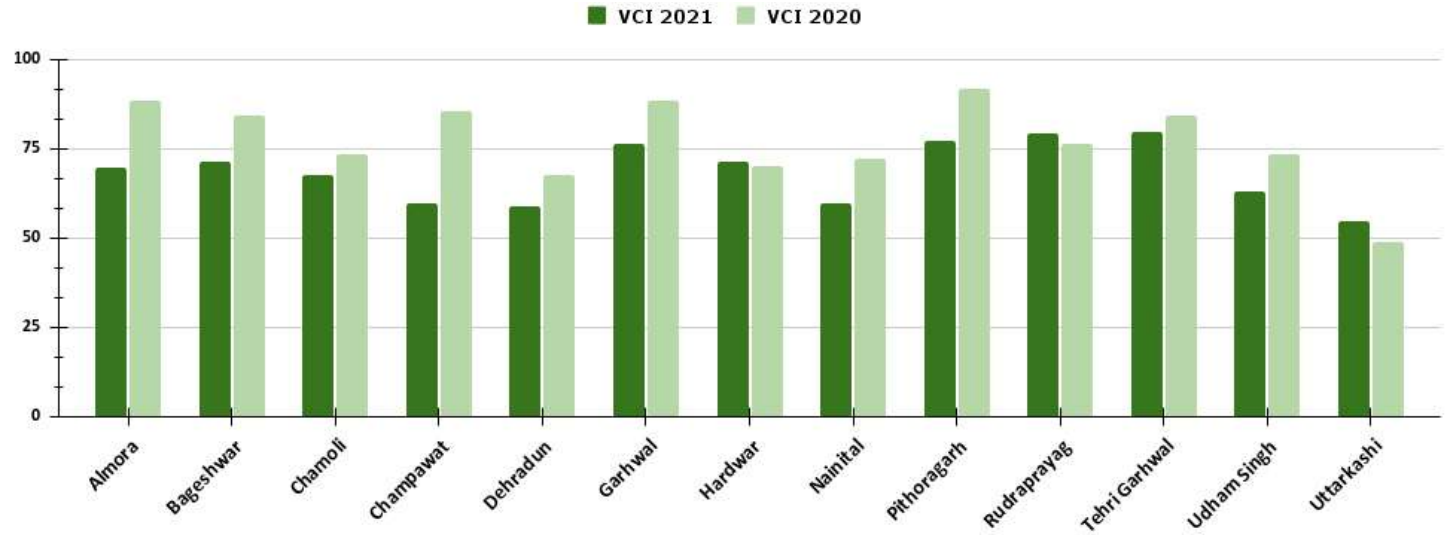


## Temperature Condition Index (TCI)



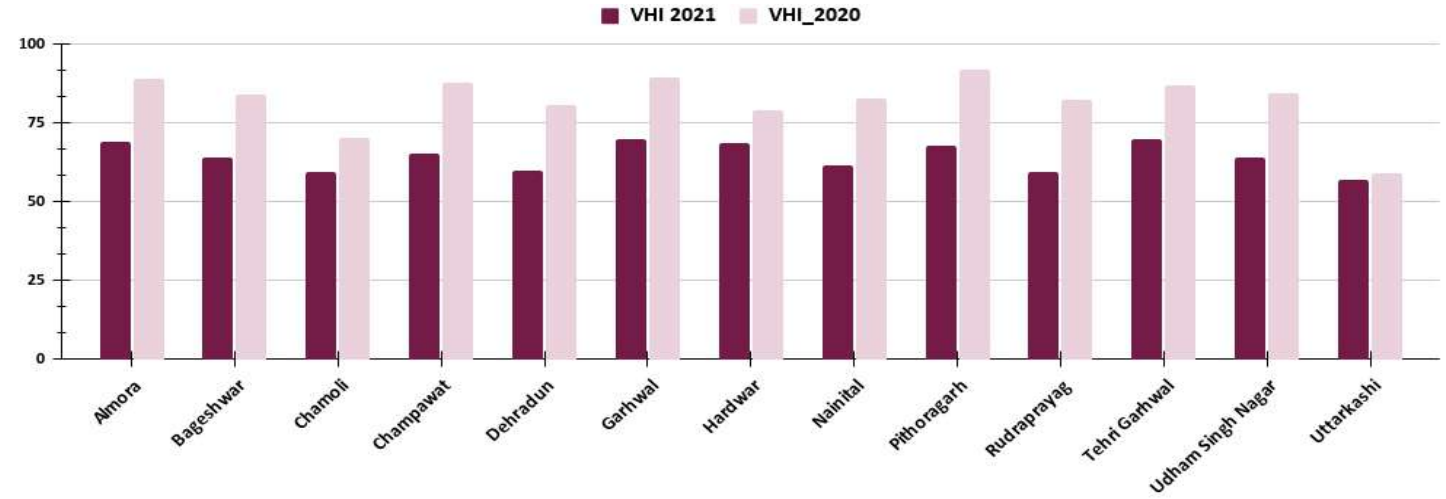

( TCI <40 indicates thermal stress; TCI >60: favorable condition)

## Vegetation Condition Index (VCI)




( VCI <40 indicates moisture stress; VCI >60: favorable condition)

## Vegetation Health Index (VHI)




( VHI <40 indicates vegetation stress; VHI >60: favorable condition)
( VHI>65 indicates good vegetation condition)
( VHI>85 indicates very good vegetation condition)

For Drought : ( VHI<15 indicates drought from severe-to-exceptional intensity)
( VHI<35 indicates drought from moderate-to-exceptional intensity)

## Crop Specific Advisory

| State | District | Crop(Varieties) | Crop Specific Advisory |
|---|---|---|---|
| Uttarakhand | Dehradun,Haridwar,Pauri-Garhwal | Maize | When the leaves over the cobs in Zaid maize started to be dry and grain is started to be hard, the farmers are advised to harvest their crops keeping in mind the weather forecast. |
| Uttarakhand | Udamsingh-Nagar | Maize | Sow the maize in tarairegion. Sowing should be done based on weather forecast. |

## Sources

**Reservoir Status**: CWC (Central Water Commission), India | FRL: Full Reservoir Level; BCM: Billion Cubic Meter
**Rainfall**: India Meteorological Department (IMD)
S**oil Water Index (SWI)**: Copernicus Data
**Smooth Normalized Vegetation Index (SMN)**: National Oceanic and Atmospheric Administration (NOAA)
**Temperature Condition Index (TCI)**: National Oceanic and Atmospheric Administration (NOAA)
**Vegetation Condition Index (VCI)**: National Oceanic and Atmospheric Administration (NOAA)
**Vegetation Health Index (VHI)**: National Oceanic and Atmospheric Administration (NOAA)

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