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Drought 2026: A Warning for Tomorrow: From Crisis Management to Future-Ready Agriculture

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Scientific Water Planning, Crop Diversification and Climate-Smart Technology Can Protect Maharashtra's Farming Future. Maharashtra is facing an exceptionally difficult agricultural season. Deficient and erratic rainfall has affected soil moisture, reservoirs and groundwater, while several parts of the state are experiencing serious agricultural and water stress. The drought situation has also created uncertainty around the forthcoming Rabi season because winter crops depend heavily on residual soil moisture and available irrigation water.

The Indian Express +1

A central inter-ministerial team recently visited Maharashtra to assess drought conditions, Kharif crop damage, drinking-water availability and fodder requirements. The assessment also considered the likely situation over the following months.

All India Radio News

The message is clear: drought management cannot remain limited to relief after crop failure. Future agriculture must be planned according to water availability.

The Biggest Question: What Should Farmers Plant Next?

Future crop planning must begin with one fundamental question:

"How much water will actually be available?"

Crop selection should not be based only on market price or previous-year cropping patterns. Farmers should consider:

- Expected water availability
- Soil moisture status
- Groundwater condition
- Expected rainfall
- Crop duration
- Crop water requirement
- Market demand
- Availability of irrigation
- Risk of heat and moisture stress

ICAR has recently emphasized the need to align cropping patterns with local agro-climatic conditions and water availability, including diversification towards pulses, oilseeds, maize and agroforestry where appropriate.

Press Information Bureau

Rabi Planning: Water First, Crop Second

With depleted reservoirs and reduced soil moisture, indiscriminate expansion of water-intensive crops can increase future risk.

A scientific Rabi plan should include:

1. Soil-moisture assessment

Determine the available moisture before sowing.

2. Water budgeting

Calculate available irrigation water against expected crop requirement.

3. Crop prioritisation

Give priority to crops and varieties suited to available resources.

4. Critical-stage irrigation

Reserve water for growth stages where moisture stress can cause maximum yield loss.

5. Weather-based decisions

Modify irrigation and farm operations according to weather forecasts.

Water Budgeting Must Become A Farm Practice

A farmer should know not only how much water is available, but also how long that water can support the selected crop.

Farm Water Budget

Available water → Crop requirement → Irrigation efficiency → Critical growth stages →

Expected yield

This approach can prevent a common mistake: planting a high-water-demand crop first and discovering a water shortage during its reproductive stage.

Crop Diversification: The Future Safety Net

The present drought should encourage farmers to rethink monocropping and excessive dependence on water-intensive crops.

Suitable diversification can include:

Cereals

Millet, sorghum and other locally suitable crops

Pulses

Pigeon pea, chickpea and other suitable pulse crops

Oilseeds

Crops selected according to local soil, climate and market conditions

Horticulture

Drought-tolerant and regionally suitable fruit and vegetable systems with efficient irrigation

Agroforestry

Trees integrated with crops where land, climate and management conditions permit

Diversification spreads climatic and economic risk rather than placing the entire farm income on a single crop.

The New Agricultural Toolkit

Future drought management will increasingly depend upon technology.

Soil Sensors

Monitor soil moisture and support irrigation decisions.

Weather Forecasts

Help plan sowing, irrigation, spraying and harvesting.

Satellite Monitoring

Can help identify vegetation and moisture stress over large areas.

Drones

Useful for crop surveillance and identifying problem areas.

Artificial Intelligence

Can integrate weather, soil and crop data to support decision-making.

GIS & GPS

Enable location-specific farm planning and resource management. India is also strengthening digital and data-driven agricultural systems, with current policy efforts emphasizing climate-resilient planning and scientific monitoring.

The Most Important Investment: Soil

When rainfall becomes uncertain, soil becomes the farm's water-storage system.

Improving soil organic matter, reducing unnecessary soil disturbance, retaining crop residues, mulching, contour-based conservation and rainwater harvesting can improve the farm's ability to retain moisture.

Healthy Soil = Better Water Retention = Greater Drought Resilience

This is why drought preparedness should begin even during a normal rainfall year.

Future Farm Planning: 5-Year Vision

YEAR 1 — WATER AUDIT

Map wells, farm ponds, irrigation sources and seasonal water availability.

YEAR 2 — SOIL RESTORATION

Improve organic matter, soil structure and nutrient-use efficiency.

YEAR 3 — CROP DIVERSIFICATION

Introduce suitable pulses, oilseeds, millets, horticulture or agroforestry according to local conditions.

YEAR 4 — DIGITAL AGRICULTURE

Adopt weather advisories, sensors, satellite monitoring and precision technologies.

YEAR 5 — CLIMATE-RESILIENT FARM

Develop an integrated system combining water security + healthy soil + diversified crops + technology + market planning.

From Drought Relief To Drought Preparedness

Relief is necessary when disaster occurs. But resilience is built before the next drought arrives. Maharashtra's present situation provides an important lesson: agricultural planning must shift from "What do we do after rainfall fails?" to "What should we plan before rainfall fails?" The future farmer will need to think like a water manager, soil manager, crop planner, technologist and entrepreneur—not only as a crop producer.

The Way Forward

Water Security

Rainwater harvesting + farm ponds + groundwater recharge + micro-irrigation

Crop Security

Diversification + suitable varieties + balanced crop planning

Soil Security

Organic matter + conservation practices + scientific nutrient management

Climate Security

Weather forecasting + drought preparedness + contingency planning

Income Security

Value addition + market intelligence + diversified farm enterprises

- The drought of today should become the lesson for the agriculture of tomorrow.
- Future agriculture will not be built by waiting for better rainfall.
- It will be built by better planning for every drop of water.