किसान कृषि स्वास्थ्य रिपोर्ट

Kisan Agricultural Health Report

Reporting Period: 30/09/2024 to 30/03/2025

Season: Grishma (Summer)

Average Temperature

27.6°C

Range: 19.1°C - 43.8°C

Average Humidity

30.4%

Range: 13.0% - 86.0%

Plant Health

31%

22 of 71 plants healthy

Temperature & Humidity Data

Temperature Analysis

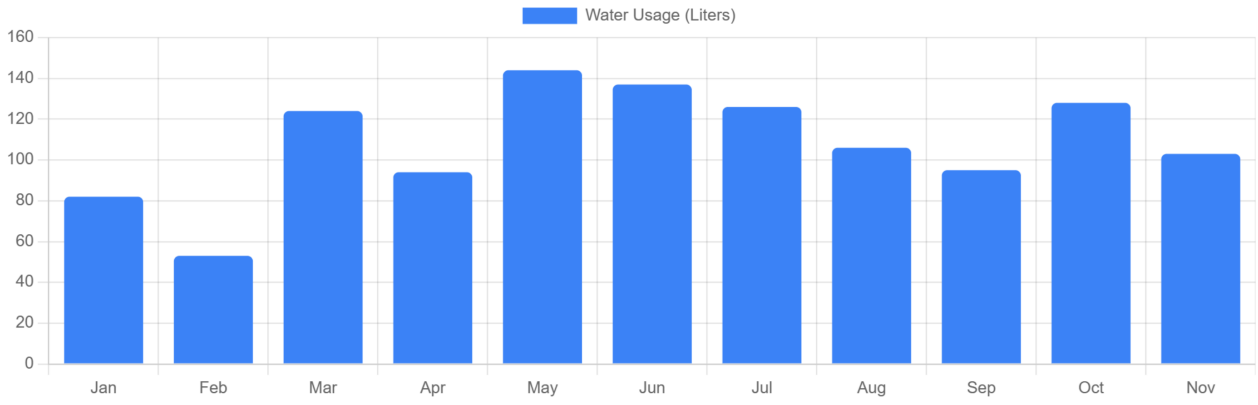
Metric	Value (°C)
Average Temperature	27.6
Minimum Temperature	19.1
Maximum Temperature	43.8
Temperature Range	24.7
Number of Readings	37

Humidity Analysis

Metric	Value (%)
Average Humidity	30.4
Minimum Humidity	13.0
Maximum Humidity	86.0
Humidity Range	73.0
Number of Readings	37

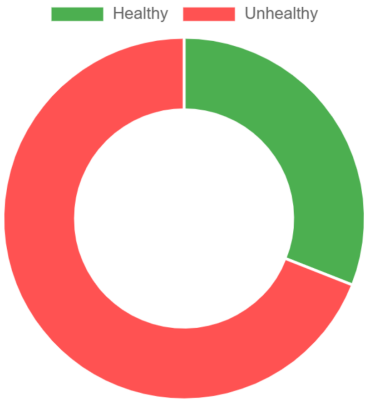
Monthly Water Usage (Liters per Hectare)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
82 L	53 L	124 L	94 L	144 L	137 L	126 L	106 L	95 L	128 L	103 L



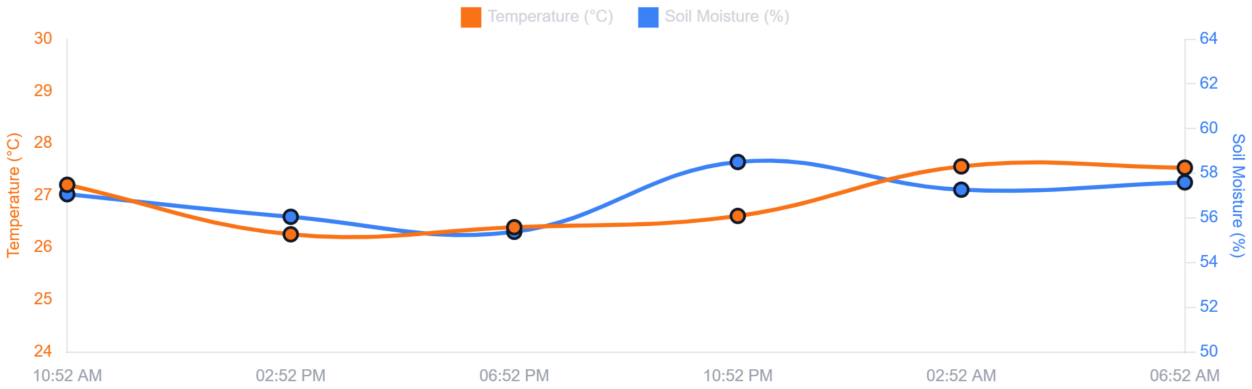
Plant Health Analysis

Plant Status	Count	Percentage
Healthy Plants	22	31%
Unhealthy Plants	49	69%
Total Plants	**71**	**100%**



24-Hour Soil Forecast

Date	Time	Temperature (°C)	Humidity (%)
30/03/2025	04:22 pm	27.2	57.1
30/03/2025	08:22 pm	26.3	56.1
31/03/2025	12:22 am	26.4	55.4
31/03/2025	04:22 am	26.6	58.5
31/03/2025	08:22 am	27.6	57.3
31/03/2025	12:22 pm	27.5	57.6



Agricultural Insights for Indian Conditions

Soil Moisture and Temperature Insights for Farmers

This report analyzes soil moisture and temperature data for the past few months to provide practical advice for irrigation management.

Insights on the Data

The data shows average temperatures and soil moisture levels for different months. For example, 2025-01 had an average temperature of about 27.8°C and an average soil moisture of roughly 35.4%. Higher numbers generally mean more moisture or higher temperature. Standard deviation gives an idea of how spread out the data is; a higher standard deviation indicates greater variability in those measurements. The median temperature/moisture is the middle value, providing a less sensitive picture than the average.

💧 Practical Irrigation Advice

2024-10: Average temperature of roughly 29°C and soil moisture around 33.6%. **Moderate irrigation** is needed to maintain adequate moisture levels.

2024-11: Average temperature of about 27°C and soil moisture of about 33.3%. **Moderate irrigation** is still likely appropriate, as moisture is in the moderate range.

2024-12: Average temperature of about 25.3°C and soil moisture of about 36.8%. **Light irrigation** is likely sufficient, as the moisture is higher than in some other months.

2025-01: Average temperature of around 27.8°C and soil moisture at 35.4%. **Light irrigation** may be necessary depending on recent rainfall.

2025-02: Average temperature of about 27.1°C and soil moisture around 37.1%. **Light to no irrigation** may be needed.

2025-03: Average temperature of approximately 26.6°C and soil moisture around 27.6%. **Moderate to heavy irrigation** is needed, as moisture levels are quite low.

Important Note: Irrigation needs vary based on crop type, soil type, and specific microclimatic conditions. These are just general guidelines based on the data.

⚠️ Potential Issues

- **2025-03:** The significant drop in soil moisture to about 27.6% indicates a potential drought condition, requiring more irrigation. The low moisture, coupled with potentially drier weather conditions, will need close monitoring and likely increases in irrigation.
- **Overall:** While temperature variations are within typical range for the location, the wide variation in soil moisture indicates a need for more detailed soil analysis to better predict and match irrigation needs to the specific soil type.

🌱 Seasonal Patterns

The data suggests a general pattern of higher soil moisture in the colder months (2024-12) and lower soil moisture in the warmer months (2025-03). This seasonal pattern is expected for the region, but specific crop needs and rainfall must also be considered.

Recommendations:

- **Regular Monitoring:** Continuously monitor soil moisture levels using moisture sensors to adapt irrigation schedules based on real-time conditions.
- **Soil Testing:** Understanding your soil type and its water-holding capacity is crucial for accurate irrigation.
- **Crop Specific Needs:** Different crops have varying water requirements. Research the specific needs of your current crops.
- **Rainfall Data:** Incorporate local rainfall data into your irrigation schedule to reduce water waste.

Disclaimer: This analysis is based on provided data and general agricultural knowledge. For tailored recommendations, consult with local agricultural experts.

Crop-Specific Recommendations

Crop Type	Irrigation Recommendation	Heat Management
Rice (Paddy)	Maintain 5cm standing water during critical growth stages	Consider SRI method to reduce water usage while managing temperature
Wheat	5-6 irrigations at critical stages, especially during grain filling	Early sowing to avoid terminal heat stress
Vegetables	Drip irrigation with mulching	Use shade nets during peak heat hours
Pulses (Dal)	Light but frequent irrigation	Intercropping with taller crops for partial shade

Seasonal Patterns & Recommendations for Indian Agriculture

Summer (Grishma) is typically characterized by high temperatures and low rainfall across most of India. While this presents challenges for water management, it's ideal for crops like cotton, maize, and some vegetables with proper irrigation.

Recommendations for Grishma (Summer)

Practice	Recommendation
Water Conservation	Implement micro-irrigation techniques like drip and sprinkler systems
Soil Management	Use organic mulch to reduce soil temperature and water evaporation
Crop Selection	Opt for heat-tolerant varieties like indigenous cotton, okra, and cluster beans
Shade Management	Consider temporary shade structures for sensitive vegetables

Government Scheme Connections

Indian farmers can leverage various government initiatives to improve farm performance:

- **PM Kisan Samman Nidhi:** Direct income support can help invest in quality seeds and irrigation equipment
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** Support for micro-irrigation systems like drip and sprinkler
- **Soil Health Card Scheme:** Regular soil testing for optimized fertilizer application
- **Kisan Credit Card:** Access to timely credit for seasonal agricultural operations