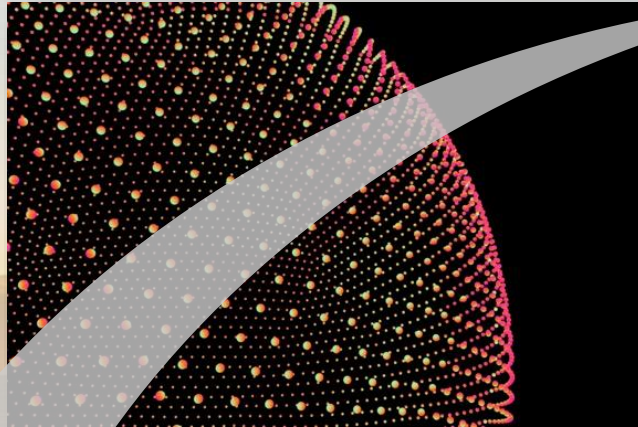


A scenic view of a tea plantation at sunset. The foreground is filled with lush green tea bushes, some in sharp focus and others blurred. The middle ground shows rows of tea plants on a rolling hillside, leading towards distant mountains under a warm, golden sky. The sun is low on the horizon, creating a soft glow and long shadows.

AGRICULTURE & WATER

A. Soil Monitoring System for Water & Energy Efficiency



Technology Description

Autonomous **wireless sensors** to track soil moisture, temperature, humidity, and environmental conditions in real time at different locations.

Data is sent to farmers. This allows growers to understand plant water needs more accurately to avoid over-irrigation

It helps farmers **optimize irrigation to reduce water consumption, minimize energy use** (associated with water pumping), and maintain optimal soil moisture to improve **crop health** and high-quality yields

B. Solar Irrigation System

Technology Description

Solar Irrigation System uses **solar power** to pump water for agricultural irrigation. This **reduces energy use** from water pumping in irrigation.

A monitoring system with automated controls and telemetry enables farmers to monitor and adjust irrigation remotely. This allows farmers to enhance **water efficiency**.

The system can be used in various crops and terrains, including off-grid locations.



C. Crop Shield and Agricultural Crop Dryer

Technology Description

A **tunnel-shaped agricultural crop dryer** reduces moisture content of crops. The dryer is powered by **solar** energy.

The dryer also **shields crops** from unpredictable weather (e.g., extreme heat, frost).

A transparent cover creates a sealed chamber where solar heat evaporates moisture in crops. Built-in ventilators circulate warm air and pushes out moisture-laden air, offering controlled airflow for consistent drying.

This **prevents crop damage**, spoilage, and contamination.



D. Agrovoltaics

Technology Description

Solar panels reduce energy related emissions. However, solar panels take up space.

Agrovoltaics is a solution to use the space underneath the solar panels to grow food.

This **reduces emissions** while enhancing **food security**.

