

Our product, SICCA (Sensor-based Intelligent Crop Centric Automation), uses innovative soil sensor technology and scalable LoRa technology to optimize water usage and save up to 60%* of water. SICCA is an IoT-based solution that can be used on both small and large farms without changing the existing pipeline structure.

SICCA uses affordable wireless technology to control the pump and valves based on a sensor node measuring various microclimatic parameters making irrigation **management smarter, reliable, and efficient.** With a **mobile app**, the control can be accessed remotely, saving time and effort for the farmer.

Thus SICCA helps farmers not just conserve water but also increase their crop yields using affordable technology.



As a part of our mission to move communities towards sustainability, we are able make an impact over 9 SDGs

I am facing these problems, are you also facing them?

Labour Shortage

Physical hardship

Irregular Irrigation

Water wastage, soil infertility, and low yield

Electricity Fluctuations

Inconvenience for irrigation & Damage to pump

Climate Change

Unpredictability

Solution: SICCA Automation

Remote Control

Precisely control your farm 24x7 from mySICCA app

Planned Irrigation

Automation by scheduler/ timer and soil moisture sensor

Protection & Management

Protect pump and Regulates Irrigation automatically

Precision Farming

Monitor & control micro-climatic parameters using sensors



Smart Savings with SICCA automation



Saves upto*

80% Time & Effort

Remotely control the farm's irrigation and fertigation from anywhere in a well-planned manner using a mobile phone without worry or physical hardships



Saves upto*

60% Water

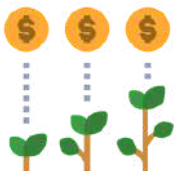
Schedule and manage irrigation activities from your mobile app and precisely irrigate using root-zone soil moisture sensors



Saves upto*

50% Fertilizers

Appropriate irrigation through SICCA system prevents nutrient leeching



Increases upto*

40% Yield

Precise and optimized irrigation and fertigation as per the crop need results in improved yield while also improving the immunity of the crop

Smart Irrigation

Complete Control of your farm's Irrigation and fertigation from your Mobile Phone.

 Main Pump

4G wireless connectivity
Connects your mobile phone to SICCA Controller From anywhere.



SICCA Controller



mySICCA mobile app




1000 up to feet

 Total 42 valves
24 wired+
18 wireless

 24 wired valves

Wired valves



 Gives range of up to 2 Km between Wireless Valves and Irrigation Pump.
LoRa wireless connectivity

SICCA Wireless Valve Node

 18 Wireless Valve

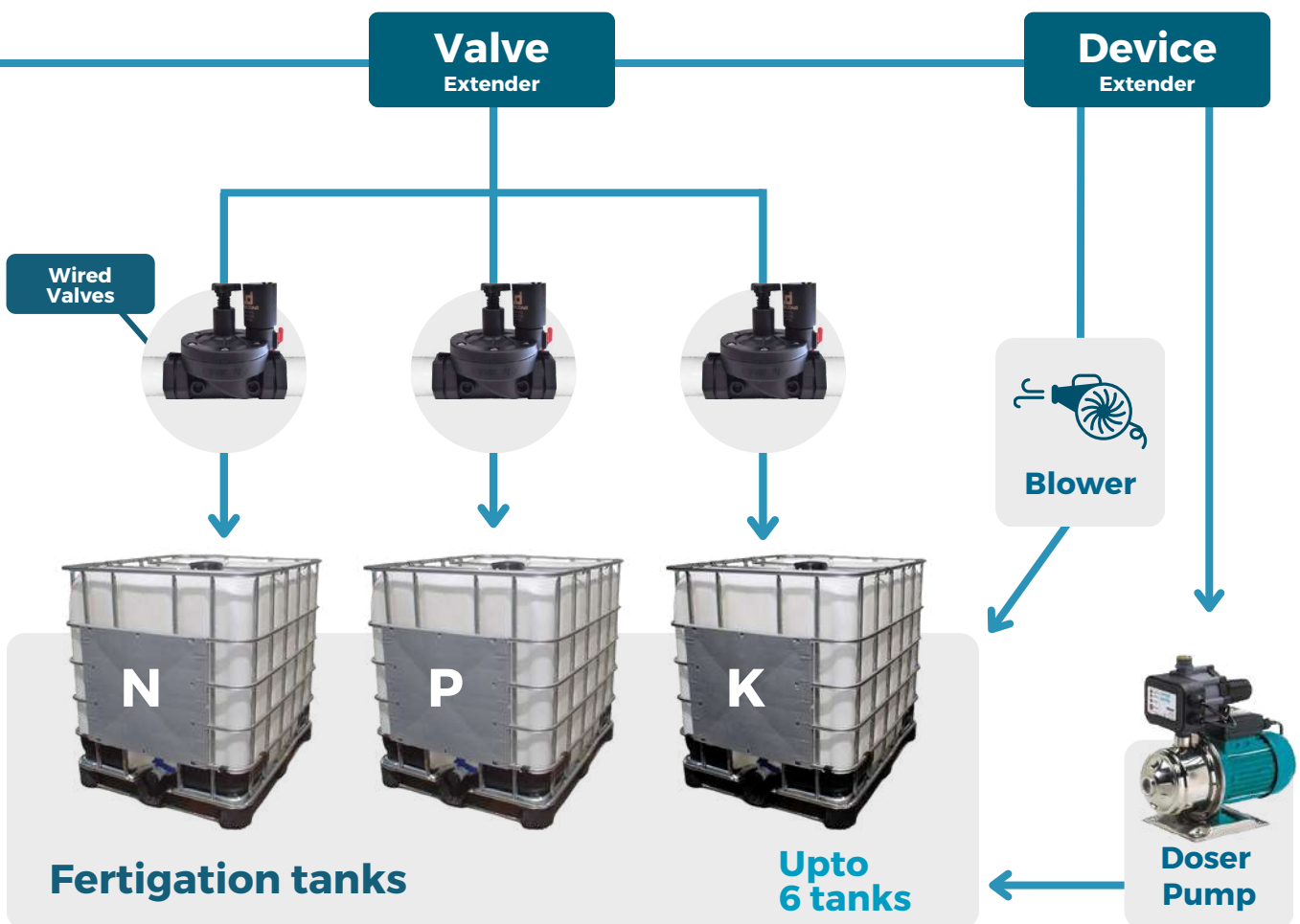
Wireless valves



Smart Fertigation

Quantitative and timely fertilizer management through Sicca system reduces nutrient wastage.

- Even mixing and distribution of water and fertilizers.
- Fertilizers are given as per need and at regular intervals.
- Fertilizers of various types are given with proper measurement.
- Fertilizer management of complete field is possible with a single fertigation unit.



- 100% Service Guarantee
- mySICCA mobile app is available in local languages
- Automation with easy installation and zero maintenance
- Retrofit design: No need to make changes in the existing pipeline





Micro-climatic data on your Mobile phone.

Now make planned decisions with micro-climatic data for maximum yield.

mySICCA mobile app



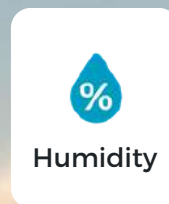
Sensor-based monitoring and control of microclimate factors such as soil temperature, humidity, sunlight, air humidity is possible as crop age increases.



Soil moisture



Soil temp.



Humidity



Ambient temp.



Ambient temp.

Farm Precision

Now, get accurate microclimatic data on your **Mobile Phone**

 Main Pump

SICCA Controller



4G wireless connectivity

Connects your mobile phone to SICCA Controller From anywhere.

Pre-planned management of climate-sensitive crops



Sunlight Intensity through curtains



Temperature through Fan-pad



Humidity through fogger



Crop Immunity is developed as proper amount of water is delivered to crops through sensors.



Sensors help in reducing the cost of fertilizers and increase the income by avoiding wastage of nutrients.

LoRa

SICCA Sensor Module



Polyhouse

Provides control over Microclimatic parameters from your Mobile phone



Soil temp.



Soil moisture



MySicca app



Displays the status of electricity

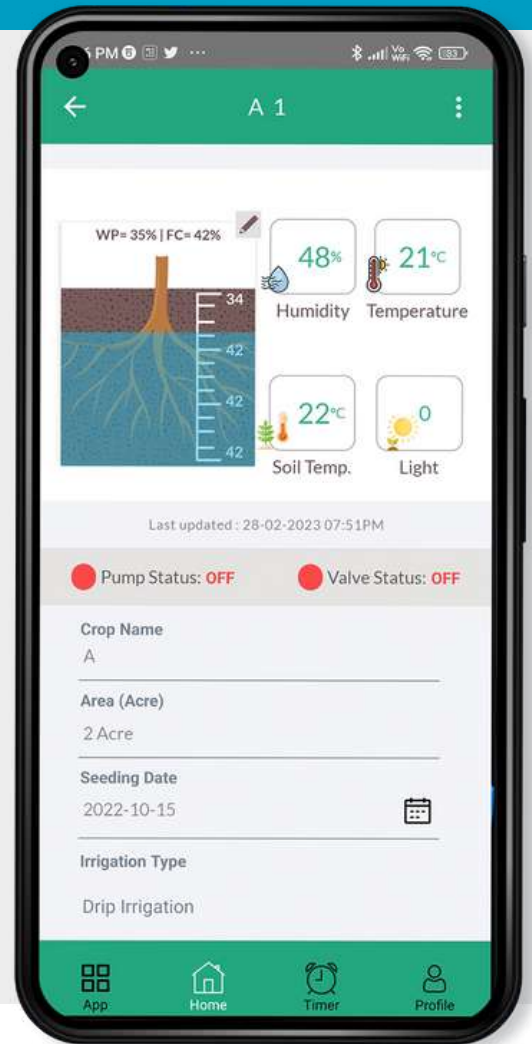


Monitors the farm status and notifies the farmer

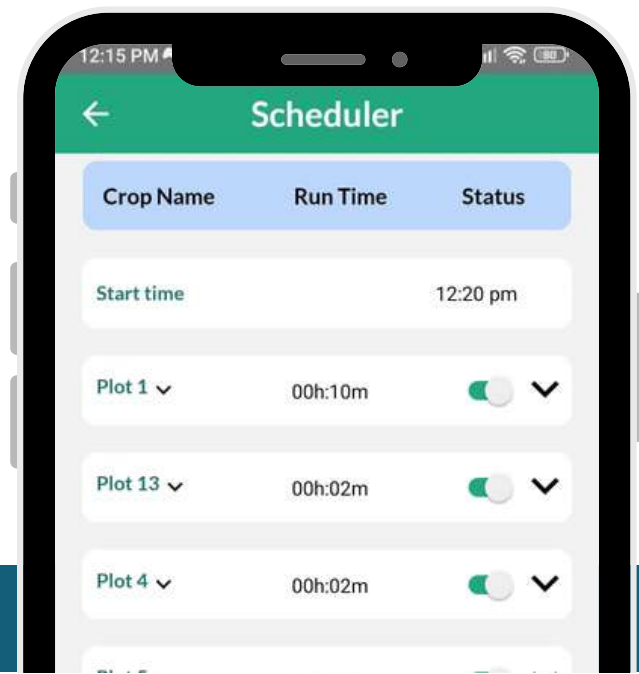
Graphical analytics of real-time and historical micro-climatic data on mySicca app



Irrigate your fields Automatically based on Wilting Point (WP) & Field Capacity (FC) calculated through soil testing



Easy setting for complex scheduling of irrigation and fertigation tasks using interactive app



Our Products



SICCA Controller



Features



Supports up to **42 valves**
24 wired & 18 wireless valves



5 to 50 acres of land
coverage with single
controller



Also supports devices like
Doser pump, Booster pump,
fogger pump, Fan-pad
arrangement etc



Precision Farming: Monitor &
control micro-climatic
parameters using sensors



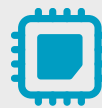
Planned irrigation:
automation using **scheduler**
/timer & soil moisture sensor



Retrofit design:
no need to change pipeline
structure, **no extra expenses**



Automatic Sand Filter
Backwash
Each plot supports 5 valves,



Sensor-based **temperature,**
humidity and light control
possible



No physical configuration is
required; all configurations
can be made via **mobile from**
anywhere in the world.



Management & Protection:
Regulates irrigation
automatically and **pump**
protection

SICCA Wireless Valve Controller (RTU)

Features



Single controller 18 wireless valves



Lora local connectivity



Wireless valves can be operated up to **2 km** from the water pump



Security feedback to ensure valves are on before pump is triggered



Wireless valves ensure no change to existing pipeline structure, no extra expenses

Wireless Valve



SICCA Wireless sensor module

Features



Quick response sensor ensures precise irrigation



Accurate root-zone soil moisture sensors means watering only in root-zone



Sensors reduce the cost of fertilizers and medicines and increase income by avoiding wastage of nutrients



Sensor-based temperature, humidity and light control possible



Corrosion-free sensors



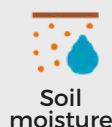
All external sensors waterproof & weatherproof



No-drift sensors



Provides **Micro-climatic data** on your Mobile phone



Soil moisture



Soil temp.



Humidity



Ambient temp.



Sunlight Intensity

For more details: sales@vhydromet.ae

Anywhere, Anytime.



SICCA Controller



mySICCA mobile app



Connected via 4G
wireless connection

A **mobile app** that can
control your irrigation
and fertigation from
anywhere, anytime.

mySICCA Mobile app

Complete Control of your farm's Irrigation
and fertigation from your Mobile Phone.



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