



Water-Efficient Automated Smart Irrigation System (WASIS) “MORE CROPS PER DROP”



Different crops have different soil water requirements at their different growth stages. Delay in irrigation creates moisture stress leading to wilting while excess irrigation can lead to infestation of crops with diseases and waste of water. The conventional irrigation system often suffers from both under and over irrigation. Water-efficient Automated Smart Irrigation System (WASIS) is a solution to this limitation.

The **main objective** of WASIS then is to develop an automated irrigation system that responds to crop water requirement and field conditions like soil moisture and rainfall.



Salient Features of WASIS:

- It is **Water Efficient**. Irrigates only when the crop requires it. Stops when soil moisture reaches desired level for the crop; avoids under or over watering. Stops if there is rain
- It is **Automated**. Irrigation is triggered automatically when soil moisture goes below critical level. No manual intervention is necessary.
- It is **Smart**. Has intelligence about soil moisture requirement of different crops at different growth stages
- It is **Customizable**. Can be programmed to the water needs of a specific crop. Can be programmed to control irrigation for different stages of a crop.
- It is **Easy to Operate**. Once installed, does not require complex machinery or maintenance. Data is stored at site, can be retrieved at convenience.
- It is **Cost-Effective**. Less operational cost in the long run.

Energy Source: Conventional/ Renewable (Solar).

How WASIS is relevant and affordable to the farmers: i) Retrofitting – can be fitted to existing irrigation system; ii) Modularity – each module can cover quarter of acre; ii) Customizability – according to soil type, user type, etc.

Variants that suit every user:

Variants	Client	Irrigation Options
Basic	Domestic (Kitchen garden, Apartment garden, etc.)	Drip, Sprinkler, Shower
Economy	Small Farms (Vegetable garden, horticulture)	Drip, Sprinkler
Classic	Large Farms (Mustard, banana, etc.)	Drip, Sprinkler
Premium	Estates (Tea, Coffee, etc.)	Drip, Sprinkler

Upgrades being planned in future: i) Automated Nutrition Supply: Drip system; ii) Automated Pesticide Supply: Drip/ Drones

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