#	Component	Quantity	Approx. Cost (INR)	Purpose
1	**ESP8266 (NodeMCU)**	2	₹300 – ₹400 each	Wi-Fi-enabled microcontroller – main controller
2	**Soil Moisture Sensor (Analog)**	4–8	₹30 – ₹50 each	Measures soil moisture in different furrows
3	**CD4051BE (8-Channel MUX)**	1	₹30 – ₹60	Allows multiple sensor input via one analog pin
4	**TIP31 (NPN Power Transistor)**	1–2	₹20 – ₹40 each	Switches solenoid valve or pump based on control signal
5	**Flyback Diode (1N4007 or IN5819)**	1–2	₹5 – ₹10 each	Protects transistor from voltage spikes
6	**Solenoid Valve (12V DC)**	1–2	₹300 – ₹500 each	Controls irrigation flow
7	**Relay Module (1/2 Channel)**	Optional	₹100 – ₹150	Alternative to TIP31 for switching
8	**Lithium-ion Battery (3.7V 18650)**	2–4	₹150 – ₹200 each	Portable, rechargeable power source
9	**TP4056 Battery Charging Module**	1 per battery	₹30 – ₹50 each	Manages safe charging of lithium batteries
10	**Battery Holder (18650)**	1	₹40 – ₹80	Connects batteries securely
11	**Voltage Regulator (AMS1117/Buck)**	1	₹50 – ₹100	Steps down voltage to 3.3V or 5V for ESP8266
12	**Breadboard / Custom PCB**	1	₹50 – ₹100	Mounts and connects components
13	**Jumper Wires (Male/Female)**	20–30	₹50	For circuit wiring
14	**Resistors (e.g., 1kΩ for base)**	2–4	₹1 – ₹5 each	Limits current to transistor base
15	**Water Pump (optional)**	1	₹300 – ₹600	If water is pumped from a tank
16	**PVC Pipes / Fittings**	As needed	₹100 – ₹200	Channels water from source to crops
17	**Plastic Enclosure / Waterproof Box**	1	₹50 – ₹100	Protects electronics from weather