

### Irrigation Materials For 2024-2025FY

SL.No	Items	Specification	Brand	Unit		Rate	Amount	Delivery schedule( Days)	Remarks
1	Button drip Emitter	2.2 and 4.2 LPH PC		Nos				30	
2	Button drip emitter plus	2 and 4 LPH PC		Nos				30	
3	Vinyl extension pipe	6 mm OD		Meter				30	
4	HDPE Extension pipe	6 mm OD		Meter				30	
5	Air release valve	20 mm in and out let		Nos				30	
6	Air release valve	25 mm in and out let		pcs				30	
7	Air release valve Continuous	25mm Threaded inlet, double action Pressure Balanced Float		pcs				30	
8	Venturi Injector	11/4"		Nos				30	
9	Proportional Injector Pump	20mm		Nos				30	
10	Proportional Injector Pump	32 mm						30	
11	Four Way - Multilevel Connector	6mm out and 7 mm inlet		Nos				30	
12	Two Way Connector	6mm out and 7 mm inlet		Nos				30	
13	6mm plastic Tee	6 mm OD		Nos				30	
14	6mm plastic Screwed Takeoff	6 mm OD		Nos				30	
15	Stake Drip	1.5 LPH and 4 LPH		Nos				30	
16	Micro Sprinkler	6 mm OD, Half Circle		PCS				30	
17	Micro Sprinkler	6 mm OD, Full Circle		PCS				30	
18	Mini Sprinkler low angle sprinkler (US	Operating pressure: 15-25 psi, Flow rate 95 to 495 L/hr		Nos				30	
19	Mini Sprinkler high angle sprinkler (US made)	Operating pressure: 15-25 psi, Flow rate 95 to 495 L/hr		Nos				30	
20	Inverted mini-sprinkler (US made)	Operating pressure: 15-25 psi, Flow rate 95 to 495 L/hr		Nos				30	

21	Excel high angle sprinkler (US made)	Flow rate 177 to 1735 L/hr, Operating pressure 10 to 30 psi		Nos				30	
22	Mini Fogger (US made)	1/4" M Barb connection, (white), with check valve		PCS				30	
23	Latching solenoid	25mm orifice 32mm port female BSP threads. Built in voltage surge protection circuit, Capacity to be switch through wireless LoRa receiver boards, Operation voltage 12-24V DC/AC optional		Nos				30	
24	Latching solenoid	50 mm orifice 50mm port female BSP threads. Built in voltage surge protection circuit, Capacity to be switch through wireless LoRa receiver boards, Operation voltage 12-24V DC/AC optional		Nos				30	
25	Float Switch	Output capacity: 30 HP pump max, Cable length 4 meter		set				30	
26	Irrigation filter	Filter 100 micron, Capacity 12 M3/hr, male BSP thread		set				30	
27	Irrigation filter	Filter 100 micron, Capacity 25 M3/hr, male BSP thread with pressure gauge		set				30	
28	Screen Filter	7 meter cube 120 mesh		PCS				30	
29	Line dripper	12mm LDPE, with 30 cm spacing, color white/brown/black		Meter				30	

30	Line dripper	16 mm LDPE, PC with 50-60 cm spacing, color white/brown/black		Meter				30	
31	LDPE Pipe	12mm						30	
32	LDPE Pipe	16mm						30	
33	Barbed Tee	12mm		PCS				30	
34	Barbed Elbow	12mm		PCS				30	
35	Barbed Joiner	12mm		PCS				30	
36	Barbed T	16mm		PCS				30	
37	Barbed Elbow	16mm		PCS				30	
38	Barbed Joiner	16mm		PCS				30	
39	Barbed Elbow Reducer	16mm x 12mm		PCS				30	
40	Barbed Tee Reducer	16mm x 12mm x 16mm		PCS				30	
41	Mini Valves	12mm		PCS				30	
42	Mini Valves	16mm		PCS				30	
43	Detachable hose Connector	15mm, hose female connector with BSPT male adapter		PCS				30	
44	Detachable hose Connector	20mm, hose female connector with BSPT male adapter		PCS				30	
45	Portable sprinkler stand	CPVC based, 35 cm square base, 60 cm raiser with 15 and 20 mm easy detachable socket. Raiser detachable with 15 mm brass FTA sprinkler socket		Set				30	
46	Portable sprinkler stand	CPVC based, 35 cm square base, 60 cm raiser with 15 and 20 mm easy detachable socket. Raiser detachable with 20 mm FTA sprinkler socket		set				30	

47	SMART irrigation controller based on ESP 32 and 8266 mcu. (Operation with AC power supply only)	Web and mobile app based water management and scheduling system with 4 watering zones.		Set			30	
48	SMART irrigation controller (AC and solar power system..complete set) based on ESP 32 and 8266 mcu	Web and mobile app based water management and scheduling system, Access and control irrigation system from worldwide, Option to control irrigation system using weather parameters, Inbuilt 8 watering zones with option to add 72 additional zones, capable to control wireless Solenoid valve based on LoRa radio frequency, Capacity to control master pump of 40- 50 HP, 40 Watt solar panel, 18-26 AH rechargeable battery, 10 Amp digital charge controller, with 12 X 10 cm rust- free box enclosure		set			30	

49	Lora Based SMART Irrigation Controller	Web and mobile app based water management and scheduling system, Access and control irrigation system from worldwide, Option to control irrigation system using weather parameters, Inbuilt 8 watering zones with option to add 72 additional zones, capable to control wireless Solenoid valve based on LoRa radio frequency, Capacity to control master pump of 40- 50 HP, 40 Watt solar panel, 18-26 AH rechargeable battery, 10 Amp digital charge controller, with 12 X 10 cm rust- free box enclosure <b>(Transmitter and Reciever)</b>						30	
50	Lora Expansion Board	Transmitter and Reciever with 8 zones inbuilt, integration with SMART Irrigation Controller						30	
51	Remote pump control and monitoring system with LoRA technology	Transmitter and Reciever with 1 channel pump control. Transmitter with LCD display to display the status of the pump. Receiver load capacity:1-50 HP pump						30	

52	Automated irrigation Valve control device	Valve type: Butterfly valve and gate valve, Valve size:80-500mm. Remote access through Telegram App. Inbuilt temperatre, humidity sensor and camera. Option to open valve at 25, 50, and 100% windows. With 80 watt solar panel, 40 AH battery and battery charge controller						30	
53	CPVC pipe	50 mm	Astral	meter				30	
54	CPVC pipe	32 mm	Astral	meter				30	
55	CPVC pipe	25 mm	Astral	meter				30	
56	CPVC pipe	20 mm	Astral	meter				30	
57	CPVC MTA	25 mm	Astral	PCS				30	
58	CPVC MTA	20 mm	Astral	PCS				30	
59	CPVC MTA	15 mm	Astral	PCS				30	
60	CPVC MTA brass	25 mm	Astral	PCS				30	
61	CPVC MTA brass	20 mm	Astral	PCS				30	
62	CPVC MTA brass	15 mm	Astral	PCS				30	
63	CPVC FTA	50 mm	Astral	PCS				30	
64	CPVC FTA	40 mm	Astral	PCS				30	
65	CPVC FTA	25 mm	Astral	PCS				30	
66	CPVC FTA	20 mm	Astral	PCS				30	
67	CPVC FTA	15 mm	Astral	PCS				30	
68	CPVC FTA brass	50 mm	Astral	PCS				30	
69	CPVC FTA brass	40 mm	Astral	PCS				30	
70	CPVC FTA brass	25 mm	Astral	PCS				30	
71	CPVC FTA brass	20 mm	Astral	PCS				30	
72	CPVC FTA brass	15 mm	Astral	PCS				30	
73	CPVC Elbow	50 mm	Astral	PCS				30	
74	CPVC Elbow	32 mm	Astral	PCS				30	
75	CPVC Elbow	25 mm	Astral	PCS				30	
76	CPVC Elbow	20 mm	Astral	PCS				30	
77	CPVC Tee	50 mm	Astral	PCS				30	
78	CPVC Tee	32 mm	Astral	PCS				30	

79	CPVC Tee	25 mm	Astral	PCS				30	
80	CPVC Tee	20 mm	Astral	PCS				30	
81	CPVC reducer	50X32 mm	Astral	PCS				30	
82	CPVC reducer	32 X 25 mm	Astral	PCS				30	
83	CPVC reducer	25 X 20 mm	Astral	PCS				30	
84	CPVC reducer cap	50X 32 mm	Astral	PCS				30	
85	CPVC reducer cap	32 X 25 mm	Astral	PCS				30	
86	CPVC reducer cap	25 X 20 mm	Astral	PCS				30	
87	CPVC reducer cap	32 X 20 mm	Astral	PCS				30	
88	CPVC tank nipple	50 mm	Astral	PCS				30	
89	CPVC tank nipple	32 mm	Astral	PCS				30	
90	CPVC tank nipple	20 mm	Astral	PCS				30	
91	CPVC float valve	32 mm	Astral	PCS				30	
92	CPVC float valve	20 mm	Astral	PCS				30	
93	CPVC ball valve	50 mm	Astral	PCS				30	
94	CPVC ball valve	32 mm	Astral	PCS				30	
95	CPVC ball valve	25 mm	Astral	PCS				30	
96	CPVC ball valve	20 mm	Astral	PCS				30	
97	CPVC gum	Medium size tin	Astral	tin				30	
98	CPVC cutter	Stanley or equivalent	Astral	PCS				30	
99	CPVC socket	32 mm	Astral	PCS				30	
100	CPVC socket	25 mm	Astral	PCS				30	
101	CPVC socket	20 mm	Astral	PCS				30	
102	GI reducer tee	40X25 mm		PCS				30	
103	GI reducer tee	25X15 mm		PCS				30	
104	GI reducer tee	25X20 mm		PCS				30	
105	GI tee	25X25 mm		PCS				30	
106	GI nipple	50 mm 4"		PCS				30	
107	GI nipple	40 mm 4"		PCS				30	
108	GI reducer socket	50X40 mm		PCS				30	
109	Thread tape	Large size		PCS				30	
110	Self Drill Screw	1 inch		PCS				30	
111	Battery operated pipe and twig cutter	12V DC battery operated. Battery rechargeable		Set				30	
112	Self Drill Screw	1/2 inch		PCS				30	

**Hydroponic Items For 2024 - 2025 FY**

SL.No	Items	Specification	Brand	Unit	Remarks	Rate	Amount	Delivery schedule( Days)	Remarks
1	Perforated vertical hydroponic tower	1.5 Length, 110 OD, 20 cm plant spacing		PCS				30	
2	PVC pipe	110 mm dia, 3 meter length	Astral	PCS				30	
3	PVC socket	110 mm	Astral	PCS				30	
4	PVC Elbow	110 mm	Astral	PCS				30	
5	PVC Tee	110 mm	Astral	PCS				30	
6	PVC end cap	110 mm	Astral					30	
7	PVC gum	1 litre		Litre				30	
8	Premix nutrients	For leafy vegetable		Kg				30	
9	Premix nutrients	For fruiting vegetables and fruits (Tomato, chilli and strawberry)		Kg				30	
10	Hydroponic Netted cup	2" Diameter (black)		PCS				30	
11	Oasis cubes	1" square dimension		PCS				30	
12	Vermiculite	For nursery raising		Kg				30	
13	Coco-peat	For nursery raising		Kg				30	
14	Soilrite	For nursery raising		Kg				30	
15	Water pump	1 HP, 250V AC, Single phase		PCS				30	
16	Water pump	2 HP, 250V AC, Single phase		PCS				30	
17	Water pump	0.5 HP 250V AC, Single phase		PCS				30	
18	Aquarium water pump	240V AC		PCS				30	
19	Air bubble (oxygen) pump	240V AC		PCS				30	



20	SMART hydroponic controller (complete set) based on ESP 32 and Raspi-3 & 4 MCU	Web and mobile app based hydroponic monitoring and management system, Access and control hydroponic system from worldwide, Inbuilt air temperature and humidity sensors. Option to add different sensors and actuators for automation. Capacity to control master pump of 40-50 HP Max,		Set				30	
21	Druk Mycodo based Mushroom Climate Control System	Web and mobile app based hydroponic monitoring and management system, Access and control hydroponic system from worldwide, Inbuilt air temperature, humidity and Carbondioxide sensors. Option to add different sensors and actuators for automation. Capacity to control master pump of 40-50 HP Max,		set				30	
22	IOT Based Mushroom Climate Control System	With 2 sets of Temperature and Humidity sensor. Output load capacity 3500W each, 240 AC, Light control capacity 1500 watts. Logging temperature/humidity data, Built in graphical interference for data analysis						30	

23	Cold Storage AC with Humidifier; IoT Based Control and Monitoring System	Single phase 240 AC, Cooling capacity 0.8 Ton, Temperature regulation 0-20 Degree Celsius; Humidity regulation 30-95%. Web and App (IoT) based control and monitoring system						30	
24	Hot Callousin Monitoring and Control	Web and mobile app based hot callusin monitoring and control system, Remote access from worldwide, Inbuilt: 1 air temperature & humidity sensor; 1 water temperature sensor; 2 Callusin temperature sensor. Option to add different sensors and actuators for automation. Capacity to control master pump of 1-5 HP Max and Water heater 3500 Watts						30	
25	Hot Callousin water heating main tank	Capacity 200 Liter, builtin water heater 3500 Watts, inbuilt temperature and electronic water level sensor and						30	
26	IOT Based Relay Switch	1 CH 16A						30	
27	IOT Based Relay Switch	4 CH 10A						30	
28	Power relay switch	Max load 10-50 kilo watts, single and 3 phase with microcontroller interface		PCS				30	
29	Power relay switch	Max load 1-5 kilo watts, single and 3 phase with Microcontroller interface		PCS				30	

30	Wi-Fi DIY Smart Switch	4 independent channel with 433MHz RF remote and wi-fi. 3 working modes		PCS				30	
31	Wi-Fi DIY Smart Switch	1 channel with 433MHz RF remote and wi-fi		PCS				30	
32	Wifi-IoT base Temperature/Humidity thermostat	Device access through Wi-Fi network and cloud based IoT system, Temperature range: 0-100 0C, Humidity 0-100%, Output load capacity: 4500 watts max, 240V AC or DC, Logging temperature/humidity data, Built in graphical interference for data analysis		set				30	
33	Rain sensor	Adjustable from 3 mm to 19 mm of rainfall, Compatable to SMART irrigation controller. Debris tolerant for reliable operation.		set				30	
34	Pump relay switch	Max load 1-5 HP, single and 3 phase with microcontroller interface port		set				30	
35	pH sensor module	Range 0-14 pH		Set				30	
36	EC sensor module	Range 0-5000 micro semen		Set				30	
37	LED grow light (Non-white light) stripe	For leafy vegetables		meter				30	
38	LED grow light (Non-white light) stripe	For fruiting vegetables and fruits (Tomato, chilli and strawberry)		meter				30	
39	LED grow light (Non-white light) bulb	For leafy and fruiting vegetables		Nos				30	
40	Portable EC probe			set				30	
41	Portable pH probe			set				30	

42	Exhaust fan	240V Ac, 80 watts or 100watts		set				30	
43	Ceiling fan	240V Ac, 70 watts		set				30	
44	Thermocol/Steroform	40 mm thickness		PCS				30	
45	Battery operated hand set	Stanley or equivalent with two batteries		set				30	
46	Hand angle cutter	Bosh type or equivalent		set				30	
47	Cutter blade	For angle cutter		PCS				30	
48	Exhaust fan	240V Ac, 80 watts or 100 watts 450mm		set				30	
49	Ceiling fan	240V Ac, 70 watts		set				30	
50	Fan assisted heater	240V Ac, 2000 watts						30	
51	Ultrasonic Fogger System	INPUT 250V AC Single phase , Output 40-45V DC, 8- 10 Amp 450 Watts, water proof power supply. 7-8L capacity fogging. Builtin ultrasonic floater and reservoir tank (500L) with auto water refilling system. Fogger output hose 50 mm OD, 1.2 m height						30	
52	Bio-acoustic device	20 Hz to 20 KHz with the total output energy of 105 dB. With app based interfacing						30	
53	Smart temperature and Humidity sensor	LCD-zigbee interface						30	
54	RF switch 8	433Mhz 8 channel with microcontroller interface						30	
55	RF switch 4	4 CH with microcontroller interface						30	
56	poly compression tee 20mm							30	

57	poly compression tee 25mm							30	
58	poly compression tee 32mm							30	
59	Dripkit Set 250m2	250 sqm 30cm spacing						30	
60	Dripkit Set 500m2	500 sqm 30cm spacing						30	
61	AC Split system 1 tons hot and cold	1 tons hot and cold						30	
62	AC Split system 1.5 tons hot and cold	1.5 tons hot and cold						30	
63	AC Split system 2 tons hot and cold	2 tons hot and cold						30	
64	Automatic Greenhouse side ventilation rolling and unrolling device	Built in temperature and humidity sensor, greenhouse side rolling and unrolling through temperature and humidity pre-setting. Control and monitoring through web and mobile app. Roller motor 12-24V DC						30	
65	Hot callusing pipe	75mm dia with inbuilt 12 mm heating pipe, thermal insulation and connectors. Material UPVC or PVC, length 3 meter						30	
66	Clay balls							30	

**UPVC Pipes**

1	UPVC pipe	110 mm, 3 metre length	Astral	Pcs				30	
2	UPVC pipe	75 mm, 3 metre length	Astral	Pcs				30	
3	UPVC pipe	50 mm, 3 metre length	Astral	Pcs				30	
4	UPVC pipe	40 mm, 3 metre length	Astral	Pcs				30	
5	UPVC pipe	32 mm, 3 metre length	Astral	Pcs				30	
6	UPVC pipe	25 mm, 3 metre length	Astral	Pcs				30	
7	UPVC pipe	20 mm, 3 metre length	Astral	Pcs				30	
8	UPVC end cap	110 mm	Astral	Pcs				30	
9	UPVC end cap	75 mm	Astral	Pcs				30	

10	UPVC end cap	50 mm	Astral	Pcs					30	
11	UPVC end cap	32 mm	Astral	Pcs					30	
12	UPVC end cap	25 mm	Astral	Pcs					30	
13	UPVC end cap	20 mm	Astral	Pcs					30	
14	UPVC tee (cross tee) 4 ways	110 mm	Astral	Pcs					30	
15	UPVC tee 3 ways	110 mm	Astral	Pcs					30	
16	UPVC tee 3 ways	75 mm	Astral	Pcs					30	
17	UPVC tee 3 ways	50mm	Astral	Pcs					30	
18	UPVC tee 3 ways	32 mm	Astral	Pcs					30	
19	UPVC tee 3 ways	25 mm	Astral	Pcs					30	
20	UPVC tee 3 ways	20 mm	Astral	Pcs					30	
21	UPVC elbow	110 mm	Astral	Pcs					30	
22	UPVC elbow	75 mm	Astral	Pcs					30	
23	UPVC elbow	50 mm	Astral	Pcs					30	
24	UPVC elbow	32 mm	Astral	Pcs					30	
25	UPVC elbow	25 mm	Astral	Pcs					30	
26	UPVC elbow	20 mm	Astral	Pcs					30	
27	UPVC mta	50 mm	Astral	Pcs					30	
28	UPVC mta	25 mm	Astral	Pcs					30	
29	UPVC fta	50 mm	Astral	Pcs					30	
30	UPVC fta	40 mm	Astral	Pcs					30	
31	UPVC fta	25 mm	Astral	Pcs					30	
32	UPVC fta	20 x 15 mm	Astral	Pcs					30	
33	UPVC reducer socket	50 x 25 mm	Astral	Pcs					30	
34	UPVC reducer socket	40x25 mm	Astral	Pcs					30	
35	UPVC reducer socket	32 X 25 mm	Astral	Pcs					30	
36	UPVC reducer socket	25 X 20 mm	Astral	Pcs					30	
37	UPVC ball valve	50 mm	Astral	Pcs					30	
38	UPVC ball valve	32 mm	Astral	Pcs					30	
39	UPVC ball valve	25 mm	Astral	Pcs					30	
40	UPVC ball valve	20 mm	Astral	Pcs					30	
41	UPVC weilding gum	200mL	Astral	Pcs					30	
42	UPVC weilding gum	500mL	Astral	Pcs					30	