GNG 1103

Final Bill of Materials

Deep Water Culture Hydroponic System

Submitted by:

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The following is the final bill of materials. Note that no solar energy products were actually purchased, but included in this document is a hypothetical bill of materials if the solar products were to be purchased.

Reservoir

Item	Description	Unit Price	Units	Price
Reservoir bin	102L capacity	$15.00/bin	2	$30.00
Air pump	Pumps air into the reservoir to replenish oxygen used by the plants	$30.00/unit	1	$30.00
Net pots	Pots with rectangular holes in them which allow roots to grow out and into the water.	$15/15 pots	1	$15.00
Clay pellets	Inert material (does not affect pH) that is placed in net pots. Provide support for the plants.	$20.00/2.5L	1	$20.00
Foam Board	Polystyrene board that floats on the water with holes allowing the plants' roots to reach the water.	$15.00/8'x4'x1" board	1	$15.00
Vinyl Tubing	Tubing that connects the air pump to the air stone. 0.17" inside diameter, ¼" outside diameter.	$10/10'	1	$10.00
Total Price:				**$120.00**

Piping System

Item	Description	Unit Price	Units	Price
PVC piping ¾"	Piping 3/4 inches in diameter	$20.00/10'	2	$40.00
¾" valves	Check valves to stop backflow	$12.50/unit	4	$50.00
¾" PVC elbow fitting	90 degree PVC elbow fitting	$2.50/unit	6	$15.00
¾" PVC tee	Splits the flow of the fluid in the PVC into two directions	$5.00/unit	1	$5.00
¾" Male PVC adapter	For connecting pipes to valve	~$2.00/unit	8	$15.00
Total Price:				**$125.00**

Grand Total (Without Solar Energy)

Subsystem	Price
Reservoir	$120.00
Water reception	$125.00
Total Price:	**$245.00**

Solar Energy

Item	Description	Unit Price	Units	Price
22W solar panel with charge controller	Primary power source	$135.00/panel	1	$135.00
Charge controller cable	Cable to connect controller to battery	$25.00/unit	1	$25.00
Battery	12 Volt, 20 Ah	$120.00/unit	1	$120.00
Power inverter	Converts DC input to AC input for air pump usage	$30.00/unit	1	$30.00
Inverter adapter	Adapter to connect battery to inverter	$20.00/unit	1	$20.00
Total Price:				**$330.00**

Grand Total (With Solar Energy)

Subsystem	Price
Reservoir	$120.00
Water reception	$125.00
Solar energy	$330.00
Total Price:	**$575.00**