HYDROPONIC FARMING

a smart way of farming

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HYDROPONIC FARMING

Hydroponic System is a system of growing crops without soil, often called soilless farming. In the hydroponic system, the plant roots grow in a liquid nutrient solution or inside the moist inert materials like Rockwool and Vermiculite. The liquid nutrient solution is a mixture of essential plant nutrients in the water.

These system are :

- Resource conserving
- Commercially competitive
- Environmentally sound
- Socially supportive

Understanding the demand

- Inclination of population towards organic products
- Higher yield than chemical farming.
- Unaffected by alteration in water level over the crop season which is the main cause of crop failure.
- Sustainable and disease resistant.
- Vital for healthy living.

LOCATION STUDY

- Office Location: Bhilai(C.G)
- Customer Location: 15Km radius of Bhilai
- Source of water: Ground water, Hasdeo-Bango Project
- Source of electricity: BMC Thermal Plant
- Transportation Media: Van,Mini truck.

Raw Material Study

Grow Room

Elevated Stand

Water pump

Small pot

Drainage Tube

Timer
Thermometer

Seeds

Nutrient Solution

Induction Light

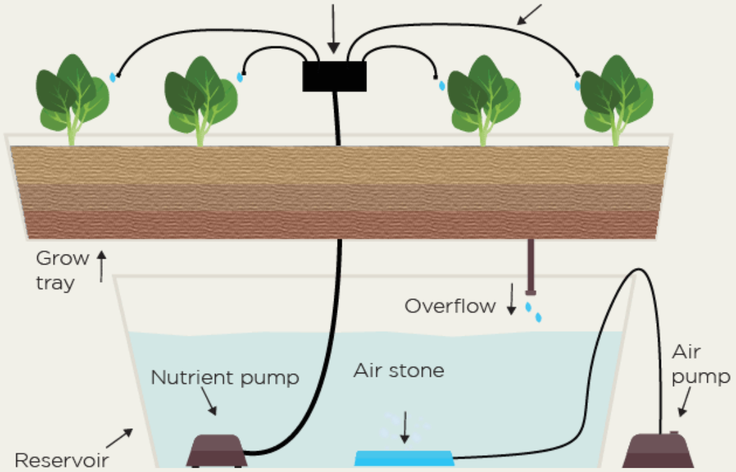
Reservior

Trays

Sprayers

Technical Study

- Contacted local laborers and trained them for hydroponic farming.
- Contracted our skilled workers for tank development.
- Transported the required materials from warehouse to the site.
- Assemble the hydroponic system.
- Acquired the water and electricity connection from authorities and connected the input-pump-output assembly valves.



Drip Irrigation System

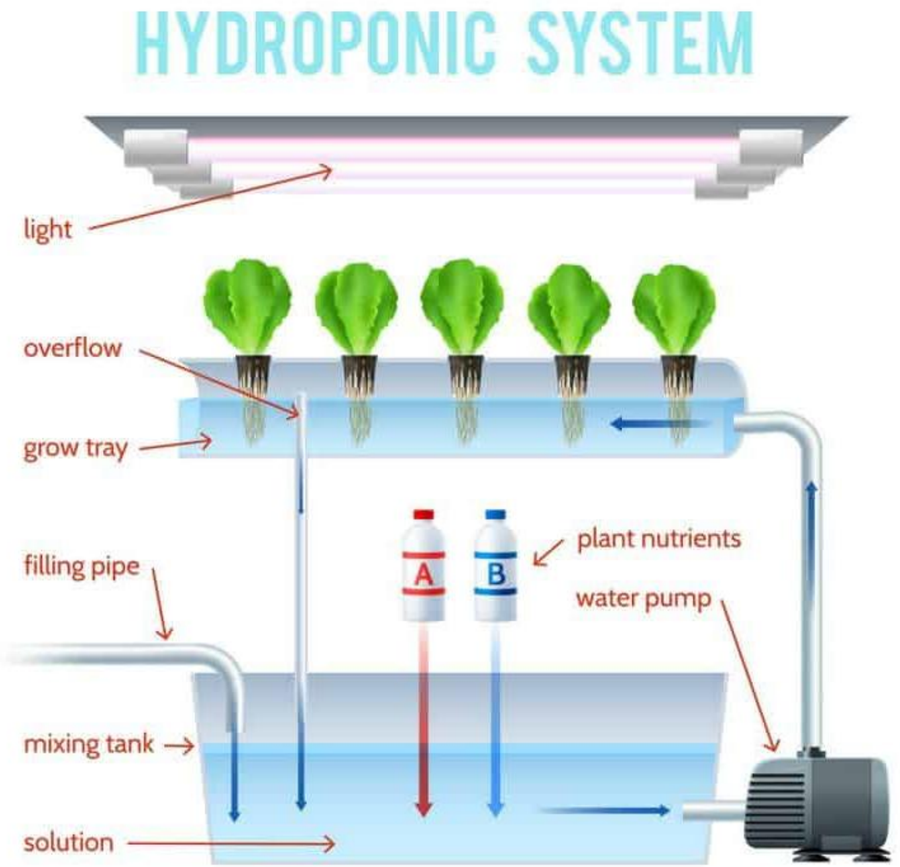
A drip system is an active hydroponic system. This means that it uses a pump to feed your plants with nutrients and water regularly.

Advantages:

- Water directly available at the root.
- Water conservation by the reduction of the amount of evaporation or deep drainage.
- No water lodging.

SET UP

- Started laying growing tubes made of 6" PVC pipe, a stand and trellis made of PVC, a 50-gallon nutrient tank, a pump and a manifold.
- The tank sits under the table of 6" PVC growing tubes, and the pump sits inside the tank to push nutrients up to the plants via a manifold of smaller PVC pipes and plastic tubes.
- Each growing tube has a drainpipe that leads back to the tank.
- To get the nutrients to the plants in this system, water is pushed through a square of PVC, the manifold, and then gets shot out to small plastic tubes that run inside each of the larger growing tubes.
- The nutrients shoot out the hole and spray the plant roots. At the same time, the jet of water makes air bubbles so the plants get enough oxygen.
- Filling 50 gallon tank with water and adding cups of nutrients according to measurement. Turning on the pump for half an hour for nutrient to mix with water.
- Taking the seeds or plant cut and planting them in small pot.
- Using the plant clips and string to tie the plants to the trellis.
- Monitoring the groeth of plant in daily basis with careful inseption.



Market Insight

- The target customers include the major retail outlets and export markets for the vegetables.
- The target customers for instant lawn include nursery and garden centres, landscapers, and private customers.
- Providing the hydroponic farming set up and maintenance in customized way.

Source of Finance

- Agricultural loan from cooperative banks.
- Self financed amount
- Money through advance payment

Financial Study

Fixed Deposit

- Elevated stand
- Small pots
- Trays
- Timer thermometers
- Sprayers
- Reservior
- Induction light
- Drainage pipes

Operational Cost

- Warehouse Rent
- Transportation Cost
- Electricity bill
- Wages
- Nutrients
- Seeds

Profitability

ITEM	PRICE
Fixed Deposit	
• Reservoir	Rs.25,000.00
• Drainage Pipes	Rs.25,000.00
• Pot(100 piece)	Rs.3000.00
• **Induction light**	Rs.12,000.00
• **Miscellaneous**	Rs.20,000.00

Fixed cost estimate=Rs.85,000.00

ITEM	PRICE (YEAR)
Operational Cost	
• Rental	Rs.55,000.00
• Transportation	Rs.18,000.00
• Electricity Bill	Rs.6000.00
• **Wages**	Rs.12,000.00
• **Nutrients**	Rs.5,000.00

Operational cost per year=Rs.96,000.00

Total cost incurred =Fixed cost+ Operational cost+ Bank loan repayment
=Rs. 85,000+Rs. 96,000+Rs. 9,000
=Rs.1,90,000.00

Total Revenue per year=Rs. 6,00,000.00
Total income after taxation=Rs. 5,70,000.00

Thankyou