

## Wick Irrigation: A Sustainable Water Saving Method

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In recent years, the importance of sustainable farming and water-saving practices concerns the world as more people are investing in terrace gardening for their daily vegetable needs. Sustainable farming practices help create a resource-rich healthy environment. Wick irrigation is one such sustainable water-saving method that can be easily implemented in home gardens. It is a method used to deliver water to plants slowly and efficient manner. Despite few economic concerns, the wick irrigation method holds significant potential for the future of urban farming.

### Introduction

The wick irrigation (Thiri nana in Malayalam) is widely popularised among urban households and SHGs by KAU and KVKs in Kerala. Wick irrigation is an innovative method of watering plants, especially in terrace gardening which uses a wick made up any absorbing materials like cotton to draw water supplied directly into the roots.

### Materials required

1. Wick (about 25rs. per wick)
2. Growbags (about 16rs. per grow bag)
3. PVC pipes (ideally 4inch diameter)
4. Potting mix
5. Seeds
6. Bricks for support
7. If possible water pipe or any water source nearby



Wick and Grow Bag



Elbow valve

### How to set up?

- Take a PVC pipe with holes to place the wick with a spacing of about 60cm distance between each hole.
- Place the PVC pipes in the desired layout based on the available space for gardening.
- Take a grow bag with a hole at the center insert the wick and make sure that 3 inches of wick is left at the bottom to insert into the pipe.
- Fill the grow bag with the desired potting mix (soil + cow dung + bone meal + neem cake) by fixing the wick at the center.
- Place 2 bricks at each side of the hole to hold the weight of the grow bag and place the grow bag by carefully placing the wick inside the pipe through the hole.
- Supply the desired quantity of water through the elbow valve fixed at the end of the pipe.
- Wick absorbs water from pipes and supplies it to the roots of plants through its capillary action.



### Maintenance tips

- Do check the water level inside the pipe regularly and refill if needed.
- Clean the pipes to prevent algal growth if any.
- Replace the wick if there is any wear and tear or if its water-delivering capacity reduces.
- Ideally, change the potting mix every year to retain the nutrient content.
- Irrigate the plants at weekly intervals
- One can grow crops that can be cultivated in grow bags like Chilli, Spinach, Brinjal, Lady's Finger, Beans, Tomato, Cabbage, etc

### Advantages

- Efficient water-saving and low-cost technology.
- Provides consistent water supply to the plants.
- No overwatering and drainage issues.
- Ideal for terrace gardening as the water cannot seep and damage the walls.
- An effective method of watering during the summer season as there is no water loss due to evaporation.
- The ideal method for growing vegetable crops at home to meet our daily requirements.

### Conclusion

Wick irrigation plays a major role in sustainable urban farming while conserving water. It can be easily adapted by poor farmers due to low installment cost and maintenance costs and other benefits. Hence it's time for us to adopt this technology in our household for sustainable farming.