

Bag Gardening



Why to choose this solution?

For many urban and slum dwellers, space is limited, while for those living in areas with insufficient rain, the same is true of water. For all these growers, vertical sack gardening is emerging as a way to grow a large supply of vegetables despite water shortages and other constraints. The garden is especially suitable for growing vegetables such as kales, spinach, coriander, onions, tomatoes, okra and eggplant. Normally, when the green leafy vegetables are ready for harvest, they can be harvested 2-3 times a week and deliver strong nutritional value, containing vitamins A, C, and K that are particularly essential for growing children.

Savings per day or production:

This creative innovation is an efficient water-management venture, as the sacks are tailored to ensure that there is no water seepage or waste, thus delivering all added water to the plants. With this option, a space that can be occupied by two kale (sukuma wiki) seedlings planted the conventional way, can be occupied by one sack that can hold up to 150 seedlings, thus increasing food production 75-fold.

Cost in money and in own time to construct:

Small garden costs vary by size, location and complexity. One would spend anywhere from USD 4 to 18 per square foot after installation. Design costs run to USD 0.05 to 0.75 per square foot, or about 5% to 10% of the project cost.

Lifetime:

Grow bags are predicted to last 7 to 8 seasons, but with good care, they can last for much longer. Grow bags fabric is pressed together, not woven, which increases their durability.

Maintenance needed:

Regularly maintaining a garden involves many things including: routine care (pruning, trimming, watering); weeding. Applying either organic or inorganic fertilizers and pesticides.

Resources needed in use:

Tools include: Jembe (shovel) - to dig the soil that will be mixed with other components for constructing the garden; Forkjembe - to dig the soil in hard ground areas; Spade - to be used in collection and mixing the soil components; Tinsnip/ Knife- to cut the top part of the tin completely; Tin punch- to punch holes on the tins surfaces and the bottom; Wheelbarrow - to measure and transport the various soil parts to the recommended ratio, Perforated tins, 50 kgs sacks, gravel, clay soil, sand soil, manure, seeds and water. Purpose of various

equipment: Perforated tins- to pass water through to the soil component, hold the gravel in the sack, filter dirty water, bottom tins have few holes and no holes on the bottom, second bottom tin has more holes, and third tin has more holes than the rest.

Problems and limits:

Digging, kneeling, stooping or bending over, and a variety of other repetitive movements that are all part of gardening can be harmful to your joints, to your bones, to your muscles, and can cause blisters on your hands and possibly also on your feet.

Where and how can you get it or make it?

Smart Farm, Hela mchangani-Kangemi Nairobi.

Skills needed to produce, install. maintenance, use:

Soil analysis, composting (or worm binning), sun- exposure charting, seed germination, planter- building, diligent pest control, pollinating, tool care and maintenance.

How to use it:

<https://www.youtube.com/watch?v=DduV2SGhJDU>

How to maintain it:

Climate effect (if any):

The technique uses very little water, and one can use recycled water, making it economical. The method has created employment and generated income for both rural and urban dwellers, and has proved to be a good way for farmers to adapt to the effects of climate change.

Where it is used and how many users are there?

It is practised everywhere.

Why is it successful?

Increased production per unit area (up to six fold). Efficient on time, labour and water. Provision of good agricultural nutrition, It can be accessed by all and low-land requirements (as low as 3 sq meters).

If you can make it, a short description, typical problems, materials needed:

Necessary Materials: A woven burlap or plastic bag, such as a used food-aid sack, serves as the container. Fill the bottom of the bag or sack with soil, build up, fill the bag, cut sites for plantings, transplant seedlings, plant on the top, and grow your plants.

How to make it (if possible):

How is it delivered and by whom?

Successful financial model

What policies and strategies helped the success?

The adoption of urban agriculture as a livelihood strategy, as it promotes vertical bag farms that need limited

space to set up and to operate.

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