

Micro-farming: A Decentralised Approach To Improving Food Security

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In every industry, humankind keeps pushing the boundaries of what is possible. The realm of agriculture is no exception. When we think of farming, we probably view it as a rural activity often conducted on multiple acres of land by specialists who have dedicated their focus to profitably growing food for others. The notion of growing your own food represents a paradigm shift in how most modern day urbanites perceive the food supply chain. You don't necessarily need acres of land to do it and the inconvenience of growing your own food has been mitigated by innovations in micro-farming techniques.

Micro-farming in this context refers to growing enough food to take care of a portion or even all of what your household needs.

Solutions are available for growing food in vessels as ridiculously small as tea cups or in spaces as seemingly inconsequential as the size of a door.

Whether you live in a high rise building at the centre of the city, or on sprawling acres out in the open countryside, you can adopt a "farm to plate" lifestyle if you are so inclined. The concept, in its purest form, can be summarised as fresher, nutrient-dense fruits and vegetables, grown close to where they are going to be eaten, ideally consumed within seven days of being harvested. No long distance haulage across or within countries, no genetic modification, no industrial pesticides, no artificial ripening and no mould.

Those more attuned to mechanised farming may picture tractors, combine harvesters, silos and so on, when they hear the word “farming”. But the frontier has been pushed out even further than that with robots the size of a suitcase taking less than 24 hours to mulch, sow and fertilize crops covering 20 hectares. Those droids featured in the 1977 *Star Wars* movie helping Luke Skywalker on his uncle’s farm are now a reality. Furthermore, you can now farm without soil, or on the side of a building, or on a flat roof top, or even inside a shipping container. These innovations are propelling the growing movement to localise food production, making it more realistic for individuals or communities to grow their own food near where it will be consumed, even in densely populated cities. This is significant because localised production means you are eating fresher fruits and vegetables. You get the most nutritional value from your fruit or vegetable if you eat it as soon as possible after it has been harvested. The *Centre for Urban Education and Sustainable Agriculture* says some apples travel 1,555 miles, or grapes 2,143 miles, before they reach the market. The inherent nutritional value of produce decreases the longer it is kept, therefore the shorter the distance and time it takes to get to the consumer the better.

The concept of growing your own food might initially elicit the visceral reaction of “*ta lo ra ye?*” (who has the time for that?), unless you’re from Benue or Imo States. In Benue, Fridays have been declared Farming Friday for civil servants. Their work week has been reduced to four days instead of five, so that they can use the fifth day to work their farms. This move is designed to reduce the state’s salary bill without massive layoffs. Ditto for civil servants in Imo who now report to the office three days a week, and are expected to utilize the remaining two working days each week to grow food.

Our understanding of what a “normal” farm looks like is being stretched each day. Hydroponics, growing crops in specialized water rather than soil, is generally viewed as a finicky, energy-expensive method of farming. Nevertheless, it is currently being used to grow lettuce, kale, and other greens in shipping containers. This techno-science method of fresh food generation will eventually become par for the course. These 40ft containers can be stacked as high as is practical, thereby increasing the yield from the same size of land. Furthermore, because the seedlings are exposed to constant light 24 hours a day, there are multiple harvests a year. Its potential in solving food security issues cannot be overstated, particularly in harsh climates or in cities with limited space and infrastructural challenges. Imagine warehouses in Ariaria, Aba, Abia State, or in Oshodi, Lagos State, stacked to the roof with re-fitted containers, and inside those containers are row upon row of fresh produce being grown for the teeming residents. This form of vertical farming is being used commercially in Japan, USA, UAE, Oman and Hong Kong. As the technology improves, mini versions for small communities or even residential estates and households will emerge. Aeroculture is another soil-less way for growing plants. This is done by misting suspended plant roots at specific intervals. The process may be too intricate for mass food producers, but it could work for micro-farmers with plenty of time on their hands and little alternative. Those who prefer to stick with traditional geoculture, and want a less technical approach to starting a mini farm, can use seed sheets. These are prepackaged specialized fabrics with the seeds of the fruit or vegetable of your choice neatly embedded and optimally spaced out. You pull the seed sheet out of its bag, place in soil, near light, outdoors or indoors, on the

ground or in an appropriately-sized container. Then you tend it as necessary.

The seed supply business might be a good venture to go into at this time because of the new crop of home-farmers seeking non-GMO, locally-sourced seeds. The demand for seed is however tempered by the option of using cuttings from the previous harvest.

Urban homesteading, turning your balcony or garden into a “grow-food” area, reduces your dependence on your salary albeit marginally.

Furthermore edible gardening, like its floral counterpart, is therapeutic. The sense of fulfillment attained from knowing you’ve developed a measure of agronomic self-sufficiency can be deeply satisfying. Water leaf, *afang*, *ugu*, kale, *shoko*, bitter leaf, corn, egg plant, carrots, green beans, lettuce, cucumbers, chili, mint, pineapple, tomatoes, spring onions, bell peppers, basil, parsley, oregano and thyme, are some of the fruits, vegetables or herbs that can be grown in or around your dwelling. It takes time and attention to detail but it can be done. If you have neither the time nor the patience, and all you can do is grow your own thyme in a recycled milk container placed by the sunlight on your kitchen counter, at least you’ve done something. For all the rest, a local farmers’ market could fill the gap.

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