

ORGANIC AGRICULTURE: A KEY TO PROMOTE CIRCULAR ECONOMY

Kanika Nag

Since small groups of hunter-gatherers roamed the planet with little but spears and stone tools in search of food, life has changed in almost every way. We now buy our food in stores rather than stalking it through the bush, and we sleep in houses and elevated shelters rather than caves. Despite these developments, some underlying responses remain in the search for safer food; for example, demand for organically produced foods has risen in recent decades due to perceived health benefits and food safety issues. With food being humanity's most basic need, much focus has been placed on monetizing organic agricultural production.

Organic agriculture encompasses various ecological chains of organic industries like organic farming, organic forestry, animal husbandry, organic fisheries, processing industry of organic agricultural products, organic agricultural trade and services, along organic consumption. Here no genetically modified or chemically synthesized substances like chemical pesticides or fertilizers are used in the process of agricultural production. Organic agriculture is a comprehensive structure proposed to enhance the profitability and wellbeing of the different networks inside the agro-organic framework.

With rising environmental issues and dramatic climatic changes, organic agriculture and organic business growth could be the next logical step. It not only safeguards the environment, but also aids in the conservation of scarce resources, the development of the rural economy, the improvement of people's quality of life, and the protection of human health. As we

have a practice of farming creation, advertising, and united commercial exercises, presently it is the ideal opportunity for us to conceptualize and come out with groundbreaking thoughts of significant worth adding value services. The next logical step could be practicing organic agricultural practices which not only could be another revenue-generating area but also can provide lots of full-time employment to our youths. With the changing agricultural scenario and global competition, there is a need to exploit the available resources at the maximum level. Here comes in handy the concept of using organic agriculture as a key in promoting the concept of the circular economy. In contrast to the linear economy (take-make-use-dispose), the circular economy (grow-make-use-restore) seeks to control resource and energy flows in order to maximize environmental benefits while minimizing costs. The circular economy has been proposed as a solution to minimize raw material input and waste generation.

According to the World Economic Forum's Definition Of Circular Economy, "It is an integrated system of steps to ensure the least natural resource input and waste disposal, also aimed at restoration, use of renewable resources, elimination of toxic chemicals, and reduction of pollution. It depends on the 5 R's of the circular economy namely, Reduce, Reuse, Refurbish, Repair, and Recycle. The "Circular Economy" approach to waste diversion is often best demonstrated by organic farming practices. They support common frameworks of recovery and waste just doesn't exist as it spins through the framework to finish the Circular Economy cycle.

Organic agribusiness, which advocates no utilization of outside inputs (chemical fertilizers, pesticides, engineered composts), shows a system of maintainability, a decrease of ecological effect, and a circular economy model. This practice, which promotes the reuse of natural matter from rural creation cycles (animal excretes and plant crop wastes), brings about the security of soils and ecosystems. The circular economy in organic agribusiness decreases the measure of waste, upgrades the utilization of land, and is liberated from any reliance on chemical composts while delivering groceries pursued by customer

If we take a closer look at both the concepts of organic farming and circular economy we find out that they both go hand in hand aiming towards the conservation and betterment of our mother earth. The practice of organic farming not only protects the environment from exposure to chemicals but also prevents various pollutions, combats soil erosion and degradation, encourages water health, and maintains biodiversity. Similarly, the principles of the circular economy on the farming system ensure that important nutrients are returned to the soil through anaerobic processes or composting, which softens the exploitation of land and natural ecosystems. In this way, as "waste" is returned to the soil, besides having fewer residues to deal with, the soil gets healthier and more resilient, allowing a greater balance in the ecosystems that surrounds it.

After taking a good look at a brief comparison between conventional and organic agricultural practices, we found that not only do they differ in being dependent or independent of external chemicals but also, the amount of post-harvest waste emissions differ drastically. In the case of conventional agriculture, the crop

waste is disposed of almost immediately and hence fails to gain any economic value. As the wastes are immediately disposed of, the failure to gain economic value from the by-products is inevitable and eventually causes economic loss. Although organic agriculture, as a component of the circular economy, can easily address certain issues. Agricultural waste can be turned into bio-products such as biofertilizers, manures, energy, materials, and compounds. Curbing and changing over the agri-food squander into new materials or items that ingrain the standards of reuse, fix and recycling could help local economies by creating a flood of benefit and, in the long haul, by decreasing natural harm.

In nature frameworks, when wastes get back to nature, they are additionally handled by the organic entity to become assets for other living organic entities. An illustration of this would be the lifecycle of creatures. At the point when creatures poop or pass on, their squanders or corpses are handled by microscopic organisms to become supplements in soils. The supplements are utilized by the plants to develop and, later, the plants become feedings for the creatures. Such an idea is the objective of the circular economy, wherein the losses from one cycle ought to be used however much as could reasonably be expected to become assets for different cycles. The modern-day organic agricultural practices seem to be a perfect fit for this objective where natural cultivation includes the development of plants and raising of creatures normally. This interaction includes the utilization of organic materials, staying away from engineered substances to keep up soil fruitfulness and natural equilibrium accordingly limiting contamination and wastage.

Three ambitions for cities to build a circular economy for food



A perfect example of organic agriculture as a key to promoting a circular economy can be the instance of OrganicFe Co., a natural compost maker situated in Bekasi, Indonesia. While there are numerous natural compost organizations in Indonesia, this organization is the one explicitly expressing that they are supporting the circular economy ideas in their cycles. With the information assets of natural squanders, chiefly made out of vegetable and organic product wastes, they can create natural manure and domesticated animal feed by using the black soldier fly larvae. The hatchlings devour vegetable and natural product squanders, and afterward, their natural wastes are handled to become natural compost. As indicated by the partners in OrganicFe Co., the way towards creating natural manure using the black soldier fly hatchlings is quicker than the customary interaction of delivering natural compost using microbes. While, with black soldier fly larvae, the manure can be delivered in 4–5 days, with the natural squanders effectively degradable in only 24 h, creating the natural compost using microorganisms requires as long as 7 days. There are different advantages from the usage of these natural manures in cultivating exercises, some of them being:

it is assimilated rapidly and viably by plants; being a natural compost it could expand the movement of positive microorganisms in the dirt, increment the development of root and stem, and furthermore stifle the chance of nuisances and plant infection. The use of black soldier fly hatchlings likewise has the chance of income coming from the actual hatchlings, as the hatchlings could be

handled to become creature feed. The larvae could be handled into parasite flour, in which the worm flour could be used as an elective protein source. This slimy parasite flour could be remembered for feed for fishes and poultry, which ordinarily use the fish flour imported from different nations. OrganicFe Co. says that the hatchlings contain 45% protein and 35% fat, with complete amino acid.

The OrganicFe Co. creation measure executes circular economy ideas in the manner that natural wastes, coming from the vegetable and organic product inventory network, could be additionally used by different cycles like, can be sent back to the vegetable and natural product store network as natural manure or to the poultry and fish store network rather as parasite flour to become assets for feed. In this way, the instance of OrganicFe Co. is reasonable to turn into a reference for research in the agri-food store network framework, as it executes the ideas of the circular economy.

Modern agribusiness easily increases productivity, but also incurs significant costs, such as overutilization of assets and resources, which damages the farming environment. The eco-natural disintegration of agricultural events and inadequate rural advancement approaches have a detrimental impact on the fragile eco-climate, reducing sustainable agriculture. The circular economy has proven to be the most effective method of improving each country's ecological economy in a manageable manner. In our region, eco-agriculture has a strong tradition. Green agricultural activities have a close relationship with the surrounding area.

A circular economy is a path to achieving a favorable change of both the economy and the environment. The repurposed use of agricultural properties should be unprecedented. The aim of circular agribusiness is to improve the overall use of rural properties. Organic agricultural advances will assist farmers in achieving a circular flow of materials and resources, proving to be a master key in the promotion of a circular economy.

