Vertical farming – The next green revolution

The world population is soaring at a startling pace and it is estimated that there would be almost 9.7 billion people living on this planet. This obviously implies that there would be 9.7 billion mouths to feed which in undoubtedly a daunting challenge for all of us. With the current infrastructure, it will become very hard to provide food for such a huge number of people. Not only is there a necessity to make arrangements for feeding so many people but there is also a crucial need to ensure that the food is healthy and safe. Farming, as we practice today has a plethora of adverse effects on the environment which includes loss of biodiversity due to increase in the expanse of agricultural lands, wastage of water and contamination of water resources and degradation of the soil.

With the expansion of the urban areas, the distance between the farmlands and the place where the consumers dwell is also increasing which takes a toll on the freshness of the food. Moreover, the changing patterns of weather in recent times are causing immense hindrance to the conventional ways of farming. All these aspects put together creates an impression of a very bleak future indeed.

But a very recent breakthrough in the realm of agriculture is proving itself to be the bright light at the end of the tunnel and is grabbing the attention of several investors and organizations. Popularly known as vertical farming, this avant-garde process of growing food has the capability to solve the imminent food crisis. In this, the farming mostly occurs in greenhouse-like enclosures under controlled environment and as the name implies, the food is grown on vertical surfaces instead of horizontal ones. The crops are grown in the vertical racks that optimizes the space to a huge extent. Everything from the nutrients to temperature and moisture can be precisely controlled.

These establishments are set up mostly in the urban areas or in their close proximity which brings down the distance required to transport the food grown and leads to drastic fall in the carbon-dioxide emission. Growing crops in a controlled environment insulate them from the unpredictable weather conditions and the attacks by pests and animals which in turn eliminates the usage of harmful pesticides.

Another remarkable aspect of vertical farming is the application of hydroponics wherein there is zero utilization of soil and the crops are grown using mineral nutrient solutions in water solvent. Due to this, the amount of water usage is reduced significantly. To sum up, the advantages of vertical farming are huge in number and probably it will be one of the major

pillars for creating a sustainable future for all of us. Hence it is expected that governments and people of nations all over the world will do their best to prevent the global catastrophe by propelling this phenomenon.

Agnimitra Das

PGDM No. 18129