

UAE at the Forefront of Sustainable Food Production and Security

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With the increasing population, natural resources are being consumed at an alarming rate and food security has been a major concern for governments worldwide. Increasing food production could be one of the answers, but it also adds to other problems like land degradation, water pollution, the depletion of water supplies, and the emergence of new pest problems. These issues highlight the need for sufficient agricultural addition, effective regulations, smart pricing policies, correction of inappropriate incentives, and policy responses which enhances the compatibility of intensive agriculture and sustainable management of natural resources and the environment. Moreover, the prevailing geo-political tensions has brought about sanctions that are driving inflation in food, energy, and other sectors and to curb these trends in inflation, central banks worldwide have raised interest rates.

Authorities in the Gulf region has put food security as a high priority in its agenda, and in this region, the UAE is playing a spearheading role to address the challenges in food security. The nation has acknowledged technology to be a key driver to boost sustainable food practices. The UAE has devised various strategies to use its agricultural endowments effectively and efficiently. The leader in AgTech in the country, Dubai, witnessed an increase of 11 per cent in food trade in 2021, which amounted to AED 57 billion, while exports hit the AED 10.8 billion mark with an increase of 11.3 per cent and re-exports reached AED 7.9 billion marking an increase by 10 per cent.

Currently, 85 per cent of food is imported into the UAE and the recent pandemic has made it evident that food security is much more crucial now than ever. The country is now driven to make decisions of adopting self-sustaining practices in agriculture and harness innovations that are rapidly taking place. The UAE also implemented the National Food Security Strategy 2051 in the year 2018, which aims to achieve zero hunger by ensuring access to safe, nutritious, and sufficient food all year round throughout the world. Under this strategy, the country aims at resilient and sustainable agricultural practices, which would increase productivity and production, while maintaining the integrity of the ecosystem. Between the years 2018 and 2019, the UAE moved to the 21st place in the Global Food Security Index from 31st.

The UAE has set a vision to achieve a green economy with food security being a key strategic pillar to drive sustainable development. In June 2020, the national system for sustainable agriculture was approved by the cabinet, which aims at improving the efficiency of farms and enhancing self-sustaining agriculture, while reducing 15 per cent of water consumption in irrigation.

The UAE has adopted various technological innovations to boost sustainability in the food sector. A new agriculture technology (AgTech) park has been proposed to be built in Abu Dhabi by the Abu Dhabi Developmental Holding Company, which can produce 39 kilotonnes of fresh produce annually. A global leader in the field of vertical farming, Aerofarms has started the construction of 5,016 square meter research and development facility in Abu Dhabi, which is set to be the largest indoor vertical farm.

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The UAE-based AgTech company, Madar Farms has also committed to build the world's first commercial-scale indoor tomato farm, which will use only LED lights. Adding to the increasing food initiative is the UAE, The Abu Dhabi Investment Office (ADIO) has partnered with Nanoracks, a US-based space hardware and in-space repurposing tools company, to build StarLab, the world's first commercial AgTech space research centre. There are numerous developments taking place in food ecosystem of the UAE and the country has tremendous potential in using controlled environments in agriculture technologies. According to data from the Ministry of Climate Change and Environment, 177 advanced farms are spread across the UAE, which use innovative AgTech and hydroponics, and over 100 institutions that are delving into organic farming.

The world is in the cusp of a green revolution, and Middle East is also gaining pace with its development in the food sector. What does the agricultural future of the Middle East have in its plate? Can we look forward to drones, fleets of agribots, and smart, connected and technology equipped animals through which data is transmitted to the farmers? Whatever the innovations may be, it is certain that AgTech will play a significant role in contributing to the food security measures taken by the UAE. Awareness and advocacy play a major role to set priorities in the community and regulate policies required for successful adoption of sustainable practices. Food security is a major pillar of a green economy and taking necessary measures to tackle the agricultural deterioration and maintain bio-capacity is necessary for the country to move ahead in this regard.

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