# The evolution of urban agriculture through technology and innovation

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The notion of urbanization is a main issue in terms of spaces dedicated to agriculture. Every year, the global urban population increases by over 3%. The United Nation estimated of 10 billion the number of people living in cities in 2050. The area of cities is therefore expanding. Between 1985 and 2015, the surface area of cities increased from 360,000 km2 to more than 650,000 km2. In consequences, the agricultural territories are decreasing, while asked to provide more and more food on a global scale. This increasing urban population has a direct impact on the food production because these are population more inclined to eat foods richer in salt, sugar, fat, but also animal and processed sourced food … Therefore, these are population more inclined to be dependent on globalized foods rather than local, and more inclined to be malnourished due to the lack of access of local and healthy foods in cities. In this context, the urban agriculture could therefore be the solution to this increasing issue about food production.

The first tracks discovered of urban agriculture dated of - 4000 years BC, it is therefore not a new concept. Throughout the history, the urban agriculture has been more likely developed in depression period, or in War period, as a solution to provide food to the urban population in context of crisis. Nowadays, the urban population increasing exponentially, urban agriculture is now the subject of numerous technical, technological, and theoretical innovations. Indeed, not only seen as a food provider, the urban agriculture is also seen as a real opportunity of social, economic, and cultural development, and respectful of the environment.

For example, in the United States, the enterprise AeroFarms has, thanks to technology, achieved to developed spaces of horizontal agriculture production in suburbs, that does not need sun to grow, and that uses 95% less water than normal agriculture. This technology leads AeroFarms to win the 2018 Global CDG Award.

Another example of innovation in urban agriculture, based in Paris and named Agricool, is showing the theorical innovation of urban agriculture. Indeed, the young enterprise Agricool, is growing strawberries in containers spread throughout urban areas. Those Cooltainers, thanks to technologies, can produce strawberries all along the year, and uses 90% less water than the usual strawberries agriculture. They also started a formation named Cooltivators, and that permits to train local people to the follow up of those Cooltainers. It therefore creates jobs for local people, while taking in account the environmental issues towards water, and provides healthy food to the urban population. The urban agriculture in this case is creating a circular economy, that takes in account the locality, the social progress, the economy and the environment.

Those examples are real symbols of the evolution of the notion of urban agriculture. Indeed, the urban agriculture is now seen as a real driver for economic, social, and cultural progress. Thanks to these new technologies and those local innovations, it can therefore be reused in different cities and be adapt to local specificities and needs.

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