

# Consumption of vegetables as a health factor

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## Introduction

The consumption of vegetables as food, in a broad sense (including fruits, medicinal herbs and condiments, among other edible vegetables), is fundamental for their nutritional value and their disease-preventive effect.

The objective of this note is to provide an overview of the importance of the production and consumption of a diversity of Intensive Vegetable Productions of Healthy Food, in order to promote the “Empowerment” of the population and the generation of producers (producers - consumers) and entrepreneurs.

## Importance of vegetables in the diet for health and quality of life

According to WHO (World Health Organization), the minimum daily consumption should be 400 g of fruits and vegetables of diversity of types and colors (150 Kg/person/year) distributed in five portions of diversity of types and colors; and ideally, 700 g/day (400 g vegetables and 300 g fruits), according to Argentine Ministry of Health (Food Guidelines - GAPA), corresponding to 7 portions; for an “Optimal Nutrition” and to avoid the so-called “Hidden Hunger”, which is a malnutrition (according to *The Lancet Global Health*) due to deficiencies of essential nutrients, such as vitamins, minerals, antioxidants and others (which is considered one of the main causes of diseases, according to Tsoukalas)<sup>1</sup> and that affects the population, which even when eating all the meals, consumes food of low nutritional quality.

## Demonstrated preventive effect on health

There is a direct relationship between the consumption of fruits and vegetables and their preventive effect on diseases. According to research conducted by the *International Journal of Epidemiology* of London, based on 95 studies,<sup>2</sup> consuming 200 g daily of fruits and vegetables, it is possible to reduce 13% the risk of diseases, while, with 800 g daily, the reduction of such risks, increases to almost 30%.

## Need for greater diversity of vegetables and fruits in the diet

It is essential to introduce greater fruit and vegetable diversity in the diet of Argentines, since five species, both in vegetables and fruits, account for more than 70% of the total volume marketed and consumed. In vegetables: potato, tomato, onion, pumpkin and carrot represent 78%; while in fruits: orange, mandarin, apple, banana and pear, account for 72%, according to data from the Central Market of Buenos Aires (MCBA), whose values are taken as a reference since it is through this market that between 17 and 20% of the national total is traded.

## Integral use of the raw material produced, a great challenge

Food losses and waste, particularly of fruits and vegetables, represent 42% in Argentina, so their prevention is essential in the development of agri-food systems, to meet the Sustainable

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Development Goals (SDGs), for example, 12 “Responsible production and consumption”.<sup>3</sup>

## Integral use of raw material and generation of by-products, within a circular agroindustry framework

By processing non-commercial production, it is possible to obtain agroindustrial by-products, such as dehydrated products, flours, preserves, among others, and for the nutritional enrichment of other foods.

## Growing urbanization is a reality that does not exempt from self-production

The trend of urban population is growing, being the global average of 54%; in developed countries of 75%, while, in some Latin American countries, this value is exceeded reaching cases, such as Argentina, where 92% of the population is currently urban. However, living in cities is not an excuse for not producing, since even in such environments, it is possible to resort to appropriate techniques such as cultivation in beds and pots, roofs and green walls, as well as the production of microgreens, sprouts and mini-vegetables, which due to their high nutritional composition (up to 4 to 40 times more than their mature counterparts, according to Frias), can contribute to improve the quality of food. In addition, the reality of the urban population is causing changes in agri-food systems along the rural-urban continuum, which represent challenges as well as opportunities, to ensure access to affordable and healthy diets for all people.

## Consumption of fruits and vegetables as a tool to reverse the trend towards obesity and overweight in the population

According to the latest Risk Factors Survey (2019), more than 65% of the Argentine population is overweight (obesity or overweight),

a problem that affects different age ranges. In contrast to the low consumption of fruits and vegetables, the share of ultra-processed foods is increasing, causing changes in the food environment, with negative repercussions on health.<sup>4</sup>

### The importance of consuming KM 0 products

Local and regional products, produced with Good Agricultural Practices, of known origin, have multiple advantages for consumers: they are usually fresher and more nutritious, of higher quality, safer, with greater added value, have been produced with less water footprint, as they travel less Km between the production site and the commercialization site, and contribute to promote local tourism and have their own style and characteristics. This is the case of the “Km 0” asparagus that, from the Faculty of Agronomy of UNICEN, we have been producing since the 90’s, within the framework of different projects and research programs. Because of all these benefits, we also support different local initiatives, with the intention that more and more of us promote the safe production of differentiated foods with the Km 0 logo, as a tool for the population to have the opportunity to choose this food category. In addition, through food education, from the Horticulture Team we promote appropriate decisions related to food, based on knowledge, seeking to empower the population, who increasingly have more supply of ultra-processed products.

### Conclusion

It is a challenge for institutions to promote the responsible production and consumption of fruits and vegetables for a better

health and quality of life of the population. For which it is essential to empower, through food education that promotes appropriate decisions when producing and / or consuming food.

### Acknowledgments

None.

### Conflicts of Interest

None.

### References

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