



## Agriculture, human and environmental health: possible approaches

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### ABSTRACT

By establishing a relationship between agriculture, human health, and the environment, one realizes the importance of understanding their meanings in human life and contexts to which they are related. Agricultural work is essential for food production and subsistence of farmers, but this activity generates changes in the environment that can impact the health of those who are directly and indirectly involved. Finding the right balance between agriculture, human and environmental health is an example of the need for intersectoriality to ensure better living conditions for the population of the countryside and the city. This study is a theoretical essay whose objective is to reflect on the relationship between agriculture, human and environmental health and the importance of this triad for the rural population. The theoretical discussion leads to the understanding of the complexity of the relationship between agriculture and the context of health and environment.

**Keywords:** Agriculture, health and environment, public health.

## 1 INTRODUCTION

The concepts of health and environment are permeated by various conceptions, making it inconsistent, according to systems thinking, to present a single definition, because the principles of this theory are surrounded by epistemological dimensions merged in the instability, intersubjectivity and complexity of knowledge. The intention of reflecting on the conceptions of health and environment and agriculture, in this study, is in line with what Morin (2011) states that it is necessary to confront different angles of observation and looks that propose the arduous task of understanding a phenomenon.

The discussion on the relationship between health and environment should be directed to the daily lives of people, their surroundings, places where they live, their homes, culture, places where they develop their work activities, and socioeconomic conditions, understanding that many of these relationships interfere or impact the health of individuals. The act of producing and being in contact with the land is

relevant in the lives of people in rural areas, and is often seen not only as a productive and profitable activity, but also as an activity of leisure and pleasure.

From the perspective of health in the context of agriculture, and given the peculiarities of life and health in rural territories as the dimensions of the way of life and rural work, with its risks, it is essential to make visible what is happening in the countryside. Therefore, discussions must be held in order to improve the approach to families who live and survive in rural areas, as well as to deepen the knowledge about the territories and the relationships established (Sombra *et al.*, 2022).

In this sense, it becomes essential to consider the multicausality of the relationship between health, environment, and agriculture. New perceptions and fields of study begin to be dialogued to understand the importance of this triad, the human being and his environment, because these are relationships that are established very early in the life of the rural population. In order to take a look at the theme, this essay aims to reflect on the relationship between agriculture, human and environmental health, and the importance of this triad for the rural population.

## 1.2 DELVING DEEPER INTO CONCEPTS AND MEANINGS

The concern to implement a concept of agriculture that does not affect the environment and the rural people involved in the cultivation process, as well as the population indirectly involved, leads us to a panorama focused on environmental sustainability. The applicability of this relationship is linked to cultural issues and intrinsically involved with the ways of living, and the social and economic interests of rural communities (Borges *et al.*, 2016).

The values, meanings, and lifestyles, as well as the land cultivation practices of family units contribute to human needs for subsistence and commercialization of products. Thus, agriculture is an important economic factor for rural families and also absorbs labor and employment in the countryside. Therefore, the agricultural work enhances the relationship between the farmer and the environment, because besides enabling the family sustenance, it establishes relationships between farmers, care and management of the land in the rural environment, satisfying their needs and the needs of others who are also indirectly benefited by the cultivation in the field.

To assume the environment as a conditioner of the health and disease process leads to the need to consider the human being as co-responsible for the socio-environmental problems arising from human coexistence with the environment. Therefore, the environment is understood here as the place where people live, live, work, and generate constant changes in themselves and in their surroundings. This requires an understanding of the complexity of being in harmony with this place, which permeates interactive economic, cultural, social, and political processes arising from human relationships (Leff, 2009; 2012).

Knowing the place where people live, the adaptations made by humans in their own environment, recognizing them to build a science that also represents the collective needs, are essential to understand the

complicity that people have with their place of life and work, and the power of this relationship (Leff, 2012). Knowing the rural environment, strengthening healthy environments, as well as improving living conditions and health-conscious practices, enhances sustainable agricultural development.

The relationship of human beings with the environment in which they live and its use for survival has been perceived since the dawn of humanity. Seen as an activity performed by human action, being practiced everywhere on the planet, agriculture is constituted as a complex ecological and economic object. It is possible to perceive the functioning of agriculture as a chain of interdependent and complementary factors, involving environmental, material, and value exchanges, considering that it is currently an important economic indicator.

The rural families, besides showing with zeal and pride what they produce with their own hands, express their feeling of dignity for having a certain territory where they get their sustenance and economic and social improvements for their members. Pleasure and work are conceptualized in very close ways, where living and seeing the practice of their daily lives expressed in the same space, in the actions they practice is a meaning of satisfaction and manifestation of autonomy by the farmers.

Thus, relating health to agricultural practices has still been challenging today, given the ways of large-scale production. Even with the Sanitary Reform movement, in 1970, and Health Promotion in the 1980s, which brought to light new conditions and determinants of the health-disease process, as well as the socio-environmental repercussions of the dominant production system, it still has not gained the due importance in the health field (Forte *et al.*, 2022).

Brazil is a strongly agricultural country, and this practice is further subdivided into two forms, modern conventional agriculture and sustainable or alternative agriculture. The notion of sustainability rescues the premises of social equity and distribution of wealth, the end of the exploitation of human beings and their equality, the guarantee of rights to health, education, housing, culture, employment and aging with dignity, in addition to ecological responsibility and citizen participation as inseparable parts of development (Amarante; Torre, 2022).

It is, in fact, known that some production processes have contributed significantly more than others to environmental contamination. The introduction of pesticides and fertilizers into the market, idealized as the solution for the supply of food for a growing world population, has led to these substances being constantly used by the rural population. The wide use of these products and the disrespect for basic safety standards, the great commercial pressure by the distribution and production companies, as well as the social problems found in the rural environment, are perceived as responsible for the environmental and human contamination observed in our environment (Chaves; Rodrigues; Pimenta, 2022).

However, there are cases in which the health sector in agriculture seeks to build experiences that express health as a result of improved living conditions, access to land, emphasizing the importance of sanitation, housing, encouragement of agricultural production, education, and access to health services.

Such experiences also seek to consider the family's forms of health care, aiming at the recognition and appreciation of this knowledge (Rückert; Aranha, 2018).

However, health in rural areas in Brazil still remains on the margins of health programs. The difficulty that farmers have in accessing health services is evident due to the geographic location of their properties, and the lack of health infrastructure in the municipalities, especially the less populated ones. When there are basic health units in rural areas, the difficulty is in developing health programs, often due to the lack of professionals and the low resolutivity of problems, requiring the displacement of this population to larger centers.

Therefore, it is the modes of production, lifestyles and ecological potential of each region that need to be considered according to its context, which leads the human species to participate in the construction of the environment as a great project and, because it is inhabitable, the act of building needs to be without destroying, innovating without depredate, whose actions involve social commitment, through inter-human relations and knowledge about the ways communities organize themselves (Leff, 2012).

The recognition that health is determined by the economic, social, cultural, and environmental conditions in which communities and populations live was incorporated into the National Policy for the Comprehensive Health of rural and Forest populations, indicating the need for intersectoral actions considered essential to impact the standard of living and health of rural populations.

Thus, to conceive the agricultural activity of a particular place or community strengthens the hypothesis of the use of the environment for survival and subsistence and consequently the close relationship with human health. It becomes necessary to aggregate several areas of knowledge, where, through intersectorality, effective results can be achieved in facing today's environmental issues. Discussing lifestyles, the ways in which people relate to the environment and derive their sustenance from it is very close to the conditions that direct their health situations.

The social and environmental practices require a population aware of environmental and human health issues, either by the exercise of agricultural work inherent to the rural environment, or by the constant coexistence with the environment, both require responsibility towards the impacts to themselves or to the community. Thus, it is necessary to strengthen surveillance, promotion, and health care actions, as well as specific policies and programs aimed at this population (Buralli *et al.*, 2021).

## 2 FINAL CONSIDERATIONS

The reflections refer to the complexity of the relationship between individuals, families, and the community. Moreover, there is the awareness that human actions in the environment interfere in the health and disease process. Thus, when delineating the related rural environment, we have in question the search for understanding of how the practice of agriculture has been developed in relation to the sustainability of

the environment and human health. Thus, sustainability here is seen as a process and not as a result, because conserving the environment and health is a constant human practice that requires continuous responsibility.

The relations of a farming population with the environment in which they live involve their beliefs, values, and information built throughout their lives, and are also conditioned to the practices that are developed in the production and management with the land. For the rural population this fusion between living and working in the same space/territory makes the daily life of this population. It is evident that the relationship between agriculture, human and environmental health is intrinsic, and we realize the need to take a paradigmatic critical stance on the conceptions of health, agriculture, the man/nature relationship, and the human being.

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