

## A Review of the Agroecological Farming System as a Viable Alternative Food Production Approach in South Africa

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**Abstract :** Input-intensive production systems characterise industrial agriculture as an unsustainable means to address food and nutrition security and sustainable livelihoods. There is extensive empirical evidence that supports the diversification and reorientation of industrial agriculture and that incorporates ecological practices viewed as essential for achieving balanced and productive farming systems. An agroecological farming system is a viable alternative approach that can improve food production, especially for the most vulnerable communities and households. Furthermore, substantial proof and supporting evidence show that such a system holds the key to increasing dietary diversity at the local level and reducing the multiple health and environmental risks stemming from industrial agriculture. This paper, therefore, aims to demonstrate the benefits of the agroecology food system through an evidenced-based approach that shows how the broader agricultural network structures can play a meaningful role, particularly for impoverished households in today's reality. The methodology is centered on a structured literature review that analyses urban agriculture, agroecology, and food insecurity. Notably, ground-truthing, practical experiences, and field observation of agroecological farming were deployed. This paper places particular emphasis on the practical application of the agroecological approach in urban and peri-urban settings. Several evaluation reports on local and provincial initiatives clearly show that very few households engage in food gardens and urban agriculture. These households do not make use of their backyards or nearby open spaces for a number of reasons, such as stringent city by-laws, restricted access to land, little or no knowledge of innovative or alternative farming practices, and a general lack of interest. Furthermore, limited resources such as water and energy and lack of capacity building and training implementation are additional constraints that are hampering small scale food gardens and farms in other settings. The Agroecology systems approach is viewed as one of the key solutions to tackling these problems.

**Keywords :** agroecology, water-energy-food nexus, sustainable development goals, social, environmental and economic impact

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