Chapter 3
Sustainable Development Through Field Vegetal Exploitation in Romania

Mariana Bran
The Bucharest University of Economic Studies, Romania

Iuliana Dobre
The Bucharest University of Economic Studies, Romania

Stefania Daniela Bran
The Bucharest University of Economic Studies, Romania

ABSTRACT

The anthropic factor, expanding its vital area, has disrupted the natural system of existence. Over time, the evolution has been managed to meet the current needs of the human being in order to reach economic and geopolitical control of interest groups. The study is based on research into the living conditions and productivity of natural and cultivated ecosystems, as a scientific basis for plant production. The local natural environment exploited by field crops has been analyzed, focusing on species with a weight in agriculture. Romania has higher agricultural potential compared to the world's agricultural potential, but there are some which sporadically influences economic development. The chapter, based on rigorous analytical documentation, highlights the technological, economic, and environmental support necessary and accessible to entrepreneurs in the vegetable sector. In order to develop a sustainable farming, the chapters try to find out what types of technology are appropriate to that.

INTRODUCTION

Branch of material and economical production, the farming manages the ecosystems. These are defined and known at all levels, so, on both local and worldwide level, a huge campaign to monitoring the life quality is under construction. The life, as existence form of matter at high organization level, is permanently in interdependence with abiotic environment. The vegetal and animal associations, as biosphere

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functioning units, cumulate solar energy and different substances of environment and transform them into vegetal, then animal biomass. Based on biogeokinetic reactions, step-by-step, the biomass is given back to the nature as available forms, the matter circuit is reloaded. Under these conditions, the ecosystem is fully presented, with dynamic balance and self-adjustment.

The anthropic factor, expanding its vital area, has disrupted this natural system of existence. Over time, the evolution has been managed to meet the current needs of the human being in order to reach economic and geopolitical control of interest groups. The proposed study is based on research into the living conditions and productivity of natural and cultivated communities in ecosystems, as a scientific basis for plant production. Activity as such takes place in farms. At the same time, the agriculture must take responsibility for protecting the soil and other environmental resources that it can degrade.

The concept of sustainability in farming implies choosing those technologies that will not compromise decisions during future. The major objectives of sustainable farming are to optimize productivity, preserve the basic natural resources, minimize and even eliminate the negative effects of intensifying agriculture. Thus, in order to ensure the quality of the environment and promote the sustainable economy, the balance between inputs and outputs, between investments and benefits must be maintained in farming systems. Increasing the level of soil productivity and preserving a healthy environment are compatible concepts if optimization of the factors of production is closely linked to the requirements of the species cultivated against them.

Currently, there is a particular interest in the conservative farming system, which, taking into account all the components of the agricultural technology system (soil tillage, plant vegetation management, crop rotation, fertilization, irrigation, crop protection, harvesting and transport) of vegetal remain, ensures long-term sustainable land use, preventing and minimizing soil degradation by restoring both its productive capacity and life support processes.

It is appreciated that only such farming can contribute to the improvement and conservation of various environmental resources, including biodiversity, leading to sustainable social development.

The vegetal biodiversity cultivated for economic purposes in Romania is diverse and includes annual species (with a few exceptions: perennial, medicinal, sugar beet and hops) that lend themselves to local conditions. Diversification, as a form of production structure, is one of the factors that influence the eco-economic performance of the farm.

The paper, based on rigorous analytical documentation, highlights the technological, economic and environmental support necessary and accessible to entrepreneurs in the vegetable sector.

BACKGROUND

The World Conservation Strategy, published in 1980 by the International Union for the Conservation of Nature and Natural Resources, included a first reference to sustainable development as a global priority (Sachs & Jeffrey, 2015).

The modern concept of sustainable development is based mainly on the Brundtland Report of 1987:

Our Common Future. Conservation and Sustainable Use - States shall maintain ecosystems and ecological processes essential for the functioning of the biosphere, shall preserve biological diversity, and shall observe the principle of optimum sustainable yield in the use of living natural resources and ecosystems. (United Nations World Commission on Environment and Development, WCED)

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