

S U M M A R Y

In the period 1990-2010, numerous structural transformations occurred in the Romanian agriculture, that created imbalances on farm size, level of equipment with mechanical means, ensuring the production factors with direct effects on economic performance.

In the next stage, it is necessary to achieve a modern agro-industrial system of production by creating competitive organizations within EU agriculture.

One way to revive the Romanian agriculture from the productive and economic point of view is the organization of agricultural production in an integrated system. The effects that determine this process are many, both economically and socially.

Of the branches of agriculture, vegetable growing is best suited for the integration process. The variety of vegetable products, their timing during the growing period, the possibility of vegetables production in protected areas, as well as the diversity of processed products are elements that favour the integration process.

The PhD thesis entitled "*Studies Regarding Integration of Vegetable Production in Galați County*" has as primary goal to do a diagnosis study of the situation of the vegetable growing in the area and secondly, to design an integrated production and recovery system of vegetable production at the level of a representative micro zone of Galati county.

The research project aimed to achieve the following objectives:

- study of bibliographical sources, both domestic and foreign, regarding cooperation and integration of agricultural production, in general, and of vegetable production, in particular; a special attention was given to the study of the factors influencing the development of vegetable industry;

- diagnostic study on the natural, economic and social framework of Galati county in order to identify specific elements of suitability for vegetable growing;

- overall characterization of Tecuci micro zone, representative for the development of vegetable growing at the national level;

- study on the integration of vegetable production in Tecuci micro zone;
- design of an integrated system of production and capitalization of vegetable products in Matca commune of Tecuci micro zone, pilot system for integration of vegetable production, where the integrator centre is the vegetable processing plant;
- determining the economic efficiency of integrated pilot system of vegetable production.

The thesis is divided into seven chapters, a section of conclusions and proposals and a bibliography.

The **first chapter** is entitled "Theoretical issues and status of research on integration of agricultural production". In this chapter, in the first part, the concept of integration was developed from the interpretation given by different authors. We agreed on the definition that integration is "*all activities starting from design and construction of gross product by the farmer and ends with the food reaching the final consumer.*" Below there are presented the main forms of agri-food integration existing in Romania and worldwide, with special attention on countries with developed agriculture: U.S.A., France, Holland, Denmark.

A sub-chapter is reserved to the description of resources and factors of vegetable production: climatic factors, soil, food, also presenting their specific features existing in Galati county.

The last part of this chapter deals with the state of research on the integration of vegetable production, from concept, forms of integration, features, predisposing and disadvantaged factors in the integration process and ending with the world experience in integrating agricultural production.

Chapter II has as content "the aim of the research, objectives and methodology of research." In the first part it is presented the purpose of the research project presented by the PhD thesis and specific objectives had in view. Further, the author presents, in summary, the stages of research, methods and procedures used. As source of information, we used statistical data existing at DARD and DJS Galati, domestic and international scientific papers, various books and treatise in the domain of the PhD thesis, informal data existing at the town halls in the area. Much of the information was obtained by direct investigations on the ground. Among the procedures used in gathering information were: questionnaire, interview, direct extraction of data and their processing, we used the comparison, analysis of specific indicators and indexes, monographs and graphic procedure. The research had in view aspects

of Galati county, with a special interest in the vegetable basin of Tecuci, and the case study was located in Matca commune.

In **Chapter III** entitled "Natural framework and situation of agricultural development of Galați county", the author deals in the first part with the natural features of Galati County directly or indirectly influence the development of vegetable growing. The issues dealt with relate to the geographical location, topography, climatic elements (temperature, precipitation, winds), hydrography and hydrology, soils, vegetation.

The study of these conditions has brought into prominence the suitability for the development of vegetable crops, particularly because of the access to water, of the temperature regime and soil quality.

In the final chapter there is succinctly described the level of development of agriculture in the county.

Chapter IV has as aim "The diagnosis study on vegetable micro-region of Tecuci". This micro zone, representative from the vegetable growing point of view for Galati county and even nationally, includes the urban centre of Tecuci and surrounding communes Matca, Drăgănești, Movileni and Cosmești.

The micro-area has a number of 71,000 inhabitants, of which about 10% are employed. Over 50% of the working population is employed in individual farms, whose main object is vegetable growing. The total number of employees employed in agriculture is only 2.43% and in (agricultural) processing industry is 15.42%. The active population, on the whole micro region, is 27,135 persons, and of these, 85.3% have employment. Employment is highest in the city of Tecuci, followed by Matca commune. Analyzed on the whole, the demographic indicators are positive, although there was an economic reflux and increased the level of migration.

Chapter V, important in the economy of the thesis has as content "The development of vegetable growing in Tecuci micro-region". This basin has an area of 22,903 hectares of arable land, representing about 8% of the arable land in the county of Galati. The private sector is predominantly accounting for 97% of the agricultural area of the micro region.

As for the crop structure, we found that the areas occupied by vegetables, holding on the whole of the micro region 10.93%. The highest percentages are found in the localities: Cosmești - 15.3%, Tecuci - 13.4% Matca - 12.5%. Together with the crops of melons, the area occupied is 15.79%.

As for the structure of the vegetable crops we noticed that the weight is held by the culture of early and summer tomatoes, which together with winter tomatoes occupied in 2009, 40% of the area.

Among other cultures, the one of cucumber could be distinguished with 11%, followed by culture of pepper with 9.6.

Given that the vegetable growers in the area began to use modern technologies, in particular Dutch ones, using imported biological material and growth simulators, yield became competitive on the market. Of the four existing communes in Tecuci micro zone, the highest yields are obtained in Matca commune.

For example, at tomatoes, the average productions reached 70 tonnes / ha, at cucumbers 50 tonnes / ha and at winter cabbage, 50 tonnes per hectare.

In the other communes, the productions are smaller, even to half, justified by the different type of technology applied.

Given the weight of the cultivated areas and average yields, the highest total output is obtained from vegetable crop of tomatoes, representing 40.42% of the total harvested vegetables. On the following places are the total yields of cucumber - 12.91% and eggplant - 7.66%.

Regarding the economic indicators, the analysis showed that the total expenditure incurred for vegetable and melon crop throughout the vegetable basin of Tecuci, in 2007, was 77.475 million lei (18.5 million), representing a major financial effort for agriculture. It varied from one year to another depending on the crop structure and fluctuating prices, but, overall, the financial volume is high. The revenue of the vegetable growers from the vegetable basin of Tecuci in the period 2007-2009 varied according to the yields obtained and capitalization prices.

Studies have shown that only the companies growing vegetables and few individual households had signed contracts with the canneries. The remaining producers have capitalized the yields on free market are not always under advantageous conditions.

Analyzing the profit of vegetables producers in the three years taken into account, we noticed differences from one locality to another. Overall, the profits for growing vegetables in 2009 was of 57.532 million lei, with a rate of return of 98.58%. It can be considered that in the vegetable basin of Tecuci the vegetable culture is profitable, with economic results superior to other cultures in the micro zone.

In **Chapter VI** it was made the "Analysis of the degree of integration of vegetable production in Tecuci micro-region".

Studies have shown that in the studied area, the vegetable production has a low degree of integration because the largest part of the production is valorised in an unorganized way, without an integrated chain, where the profit generated by the processing stage to be distributed equitably among partners that contributed to the finished product.

Of the total production achieved, only 11% is destined to processing through industrialization by independent entrepreneurs. Of the vegetables obtained the highest percentage of their industrialization is held by: beans pods - 61,8%, cauliflower - 59.3%, dry onions and eggplant with 36-37%. Vegetable producers in the region would achieve higher profits if most of the output were integrated through a cooperative system of conditioning, packaging, storage, industrial processing and valorisation in terms of advantageous competition.

Chapter VII has the share of work and title is "Project regarding the integration of vegetable production in Matca Commune." In this project we propose the integration through cooperation of vegetable production, producing an industrial complex of vegetable processing in Matca commune from the vegetable basin of Tecuci. Choosing the commune was based on the suitability for vegetable culture, the existing tradition and that now, an important area of arable land is meant for vegetable culture. In the commune there is a processing plant of vegetable products.

The assortment of processed vegetables is composed of: canned vegetables in salt water pickles type, vinegar, vegetable dishes, at the level of the European quality standards and requirements competitive on the domestic and foreign market.

The total investment, calculated based on estimate, is estimated at 750,000 Euro, of which the value of the construction is 380,000 Euro and furnishings and equipment - 250,000 Euro. The chapter includes the systemic structure of the plant and technological diagrams on manufacturing flow of the main industrialized vegetable products (stew, cucumber in vinegar, water conservation etc.). There are presented the structural elements of estimates of expenditures by type of processed products, the estimated revenue and profit assessed to be obtained both on the whole objective and on the types of vegetable products. Calculations show that the annual costs of production amount to 4247 thousand, the revenues to 5.934 million lei and the gross profit to 1.687 million lei. Calculations are made for the third year of running. In the first two years, the estimated profit is lower. The payback period is of 3 years.

The chapter also includes the calculation of specific financial indicators: economic rate of return of assets - 41.46%, return on equity - 32.8%, return on resources consumed - 33.36% 28.43%, return on revenue, gross profit margin - 28.43%, share of personnel

expenses in total expenses - 9.51%, labour productivity - 237.388 lei / worker, the breakeven point – at least 1310 thousand lei sales. The payback period is 3 times.

The final part of the thesis includes a set of conclusions drawn from the research content, mentioning the economic and social benefits of integration of the vegetable production in the area.

Some of the results obtained from studies conducted within the thesis were presented at scientific symposia.

The thesis is a source of information both for the specialists in this field and for small vegetable producers who want to integrate their production of vegetables in order to increase economic efficiency.