



UNIUNEA EUROPEANĂ



GUVERNUL ROMÂNIEI  
MINISTERUL MUNCII, FAMILIEI,  
PROTECȚIEI SOCIALE ȘI  
PERSOANELOR VÂRSTnice  
IMPLINIRII



Fondul Social European  
PERIOADA 2007-2013



Instrumente Structurale  
2007-2013



OPPOSDRU



USAMV Iași

## ABSTRACT

**Keywords:** *bakery products, consumption needs, cereal grains , crops structure optimization*

Thesis entitled „**Studies on ensuring the consumption needs of Iasi county population for bakery products by optimizing grain crop structure**” focused on bakery products market and cereal grains sector in the county of Iași. The work was divided into two parts: a theoretical part, presented in Chapters I and II and a part of my own research, detailed in Chapters III - VII.

The thesis includes a summary, an introduction and a bibliography used in its preparation.

**The introduction** presents the current situation and the general status of bakery products market and the necessity to optimize the cereal grains structure in order to ensure the consumption needs.

**Part I**, entitled „**The bibliographical study**” includes Chapters I and II.

**Chapter I** concerns „**Research on the ensurance of household consumption needs for bakery products**” and highlighted a number of issues relating to:

- history of bread and bakery products commercialization;
- bakery products typology;
- describing technologies for bakery products ;
- traceability in the milling and baking industry ;
- Quality Management for bakery products ;
- demand and consumer needs for bakery products ;
- bakery products market worldwide, in the European Union and in Romania .

Also in this chapter analyzes quantity and value developments of production, consumption and trade of bakery products at global, European and national level for the period 2007-2012.

**Chapter II**, entitled „**Aspects of cereal grains and process optimization in agriculture**” analyzes sector of grains in terms of quantity and quality by focusing on the wheat crop and presents the concept of optimization and the need to optimize crop structure describing the design of the economic- mathematical model required.



**Part II** of the thesis concerns „**Results and their interpretation**” and contains five chapters.

- **Chapter III** entitled „**The research purpose, objectives and research methodology**” addresses the purpose of research , focusing on the following objectives:
  - highlighting consumer needs, demand and consumption at the national and county level;
  - analysis of natural and socio- economic conditions of Iasi county ,
  - analysis the economic results of enterprises in the bakery sector at national and county level ;
  - evaluation county agricultural sector with emphasis on the cereal grain ;
  - development of optimization models for cereal grain structure in line with market needs ;
  - identification of product, pricing and distribution strategies in order to ensure product quality, consumer safety and economic efficiency of enterprises in the area.

In **Chapter IV - "Characterization of natural and socio- economic framework of Iași County "** were highlighted:

- location and administrative organization;
- natural conditions ( topography , temperature and humidity, rainfall and winds, rivers, water and soil);
- socio-economic features .

**Chapter V - „Case studies regarding bakery market in Iasi county”** contains within the first part the analysis of economic results for the main enterprises in the bakery sector of Iasi county (AGROPAN IMPEX S.R.L. Iași, COMPAN SA Iași, AFER S.R.L. Iași, ȚAC -ȚAC S.R.L. Târgu-Frumos și PRODALEX S.R.L. Podu Iloaiei) in the period 2007-2012 , the turnover being an economic indicator showing the volume of business for each enterprise, indicating its strategies status adopted within the competitive environment.

The second part of the chapter consists of two case studies on buying and consumption behavior in Iași county, the first case aimed at the population and the other the stores selling bakery products. The first study focused on consumption and buying behavior for bakery products aiming Iasi county population (criteria for purchasing, favorite brands and types, quantities purchased and consumed ) and the second aimed at highlighting the major suppliers and major brands in stores, the specific product range , purchase behavior and consumption but from the point of view of marketing units .



UNIUNEA EUROPEANĂ



GUVERNUL ROMÂNIEI  
MINISTERUL AGRICULTURII, PĂDURILOR  
ȘI PISCICULTURII



Fondul Social European  
POSDRU 2007-2013



Instrumente Structurale  
2007-2013



MINISTERUL  
EDUCAȚIEI  
NAȚIONALE



USAMV Iași

For the first case study the items from the questionnaire developed for research were referred to the amount of products, the monthly consumption of a person, the frequency of consumption and self-consumption and the pattern of food consumption and its determinants .

The sample was composed of consumers of bread products with temporary or permanent residence in Iasi county, with a minimum age of 18. The questionnaire included 28 questions (of which 8 questions of identification) with 56 variables. The types of questions used were open questions, dichotomous closed questions, closed questions with single response option and scaling closed questions.

The second study used in the survey a written questionnaire applied to 34 food stores in Iasi (through their representatives - employees or administrators). The sample studied was composed of representatives of stores that sell bakery products in Iasi city. The questionnaire included 21 questions ( of which 4 questions of identification) with 65 variables.

**Chapter VI** contains „**Optimization of cereal grains in Iași County in order to ensure consumption needs for bakery products**” and includes the optimization performed and an analysis of the grains sector in the Iasi county. Thus the total cultivated area in Iasi county decreased from 242905 ha in December 2007 to 223118 ha in December 2012, the area cultivated with grains registering a decrease of 7.3 % - from 152620 ha in December 2007 to 141484 ha in December 2009 .

In the year 2012 the structure of the cultivated area highlights the high percentage of areas occupied under maize (45%) and relatively low percentage of area under wheat and rye (14% ), sunflower culture weighting 12 %of total. From a quantitative view grain production has increased significantly in 2012 compared to 2007 (about 65 %) from the previous year but highlights the drastic reduction of production (of 55.76 %) related to 2011 due to climatic conditions. These conditions have resulted in low productivity also for wheat and rye, the production decreasing from 90390 tonnes in 2011 to 71415 tons in 2012. For the Iasi county average yield for cereal grains in 2012 dropped significantly compared to 2011 (by 44.25 %) while compared to 2007 it was 78.5 % higher.

Within the framework of linear programming by crops structure optimizing, were considered as restrictions:

- maximum area cultivated with the main crops ;
- maximum area cultivated with the main crops ;
- the yield.

The objective functions defined in order to achieve optimization were represented by:



UNIUNEA EUROPEANĂ



GUVERNUL ROMÂNIEI  
MINISTERUL MUNCII, FAMILIEI,  
PROTECȚIEI SOCIALE ȘI  
PERSONELOR VÂRSTNICIE  
IMPLICABIL



Fondul Social European  
POSDRU 2007-2013



Instrumente Structurale  
2007-2013



OPPOSDRU



USAMV Iași

- minimizing costs and
- maximizing profit .

In determining surface restrictions, it was taken into account a percentage of recommended crops surface in a rotation: cereals 40-60 % , 15-20% sunflower, rape 3-7% , legumes/potato 15-25%.

**Chapter VII** contains the **conclusions and recommendations** resulting from the content of the thesis.

PhD thesis concludes with a **bibliography** that includes titles within national and abroad with reference to the explored theme and two annexes consisting in the two questionnaires applied.