THE DESIGN OF ORGANIZATIONAL STRUCTURE FLOW IN THE DISTRIBUTION AND CAPITALIZATION PROCESS, SPECIFIC FOR THE INTEGRATED UNITS FROM THE PRODUCT CHAIN *"MILK AND DAIRY PRODUCTS"*

PROIECTAREA FLUXULUI STRUCTURII ORGANIZATORICE ÎN PROCESUL DE DISTRIBUȚIE ŞI VALORIFICARE, SPECIFIC UNITĂȚILOR INTEGRATE DIN CADRUL FILIEREI DE PRODUS *"LAPTE ŞI PRODUSE LACTATE"*

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Abstract: *This paper aims to provide some solutions to the problems of organization and effectiveness in the distribution and capitalization process, specific for the integrated units from the product chain "milk and dairy products". For this purpose, we took a SWOT analysis of the sector, which will identify the various steps of the system and the relationships that are formed between them, which contribute to the realization of finished products. The design flow will take into account the main stages of* ***product chain "milk and dairy products":*** *production of raw materials in different systems, transportation, storage, processing of raw materials, wholesale and retail trade of obtained finished products.*

Key words*: distribution, chain, integrated units, milk*

INTRODUCTION

The study of the distribution and capitalization in the product channels has a particular interest due to concerns of people to know the road of agricultural products from the producer to consumer, the role of intermediaries, the changes that take place on products etc.

Adapting to the requirements of the single European market would increase the performance of the product channels, in particular at the stage of distribution.

The milk production sector is dominated by households that produce for their own consumption and sell the excess milk to milk collection centers or directly on the open market (1, 4, 7).

According to the statistics of the Ministry of Agriculture and Rural Development, in 2006, in Romania were registered 1.1 million dairy farms, of which, about 93% had only 1-2 cows. Moreover, of the total number of dairy cattle farms, only in164 farms the number of milk cows was over 100 heads.

Although, in the period 1990 - 2006, the total milk production achieved in Romania has been growing, it could not provide the consumer needs of the local population, the degree of assurance varying between 55.3% and 74.9% (2, 3, 9).

Milk and dairy products contain many nutrients and provide a quick and easy way of supplying nutrients to the diet within relatively few calories.

Milk, cheese and yogurt all provide the following beneficial nutrients in varying quantities:

- calcium - for healthy bones and teeth;
- phosphorous - for energy release;
- magnesium - for muscle function;
- protein - for growth and repair;
- vitamin B12 - for production of healthy cells;
- vitamin A - for good eyesight and immune function;
- zinc - for immune function;
- riboflavin - for healthy skin;
- folate - for production of healthy cells;
- vitamin C - for formation of healthy connective tissues;
- iodine - for regulation of the body's rate of metabolism (how quickly the body burns energy and the rate of growth (10).

MATERIAL AND METHOD

To identify the main problems that occurred in the chain *"milk and dairy products"*, and to implement the opportunities offered by the external environment, the authors conducted a SWOT analysis.

For the integrated units in the product chain *"milk and dairy products"* it was designed a specifically flow of distribution and capitalization, highlighting the various stages of the system and the relationships that are formed between them and, finally, participating in the realization of finished products.

In the design process were considered the main stages of the chain:

production of raw materials, transportation, storage, processing and capitalization of finished products (wholesale and retail).

RESULTS AND DISCUSSION

The milk is considered a strategic product of the food market, which is capitalized in fresh or processing forms.

The milk is capitalized in the following forms:

- ✓ raw fresh milk (fresh milk consumption conditioning or conversion into condensed milk and milk powder);
- ✓ by transformation in the form of dairy products and cheese;
- ✓ by selective extraction of components resulting cream, butter, skimmed milk;
- ✓ by association with other materials to obtain ice-cream.

The products derived from industrial processing (*yogurt, cheese, cream, butter, etc*.) can be directly capitalize on the open market or through intermediaries (*wholesale deposits, commercial shops and selling points*).

Also, these products can be capitalized on foreign markets (5, 6, 8, 11).

Due to the low level of production capacity utilization in the sector of milk processing, the industrialization factories directed the milk production either to export *(especially milk powder),* or to products with high demand and rapid sales on internal market *(especially fresh dairy products)* (3).

Following the SWOT analysis in the product chain *"milk and dairy products"*, it has been highlighted several issues, such as:

- **strengths:**

- ➢ *significant natural potential (the existence of large areas of arable land with favorable conditions for fodder cultivation, and could be obtained large quantities of feed);*
- ➢ *growth of investment for the establishment of new units and refurbishment of the existing ones;*
- ➢ *increasing the food safety of milk and milk products;*
- ➢ *providing a superior index of milk quality comparable to that achieved in the European Union countries;*
- ➢ *improving the distribution and promotion of milk and dairy products in large enterprises;*
- ➢ *the increasing of skills in human resources and their continuous*

improvement;

- *increasing the number of graduates in agriculture;*
- *the existing desire and capacity of innovation within large enterprises.*

- **weaknesses:**

- *the largest share of milk production is achieved in subsistence and semi-subsistence not performed units;*
- *the commercial farms with medium size are working below potential;*
- *poor technical equipment and low quality in smaller units;*
- *the inputs costs for milk production are high, resulting in high prices of the finished products (butter, cheese, yoghurt, cream etc.);*
- *improper storage of the milk and dairy products at the producers level;*
- *reduced competitiveness of dairy products compared to the imported products;*
- *milk collection system is inadequate;*
- *there are delays in payments to producers;*
- *the lack of transport means of milk producers and the impossibility to pay long-distance transport costs;*
- *difficulties in the supply of milk processing plants due to large differences between the prevailing peasant market price and that offered by the processors;*
- *deficiencies in quality compliance of milk and milk products;*
- *the most of the processing sector has a obsolete production capacity of technical equipment and technology;*
- *the small producers and processors have a very weak position on the market;*
- *weaknesses in development and operation of marketing infrastructure;*
- *the existing distribution system is highly fragmented, leading to high costs of distribution;*
- *marketing networks are not yet developed in small units;*
- *the lack of financial resources needed to investments and co-investment of projects;*
- *the lack of small farmers education on market mechanisms and on the practicing of an effective management and marketing.*

- **opportunities:**

- *the increased consumption of milk and dairy products per capita and the reduce of the gap against the achieved ones in the European Union;*
- *the growth in population demand of traditional dairy products, of quality and ecologically;*
- *the emergence of new improved technologies of high productivity, with access through the National Rural Development Program;*
- *the intensification and specialization concerns emerged among private operators in the livestock sector;*
- *existence of programs to support the establishment of associative forms of individual milk producers, for the supply of inputs, products storage and effective utilization of final products;*
- *introduction of total quality management system and other food safety standards;*
- *the conversion from conventional to the organic system can be made easier thanks to the existing natural resources and many labor force in rural areas;*
- *the availability of a large market, in growing, both domestically and in Europe;*

- **threats:**

- *market shortage of material resources;*
- *climate change in recent years and natural disasters;*
- *economic instability of the market;*
- *high taxation, which leads to high debts to the state in a short time, encouraging illegal operations;*
- *price fluctuations and rising inflation;*
- *strong foreign competition;*
- *relatively low purchasing power of rural consumers in the coming years;*
- *lack of effective mechanisms to support small producers to facilitate their access to market;*
- *low functioning banking system in rural areas, especially for small units.*

The agro-food integration can be an effective solution to many problems in the chain *"milk and dairy products"* as it is purposeful the rationalization of resource use, increased production value, reducing

inefficient intermediate links and increase economic efficiency throughout the chain.

The structure in the distribution and capitalization specific for the integrated units from *"milk and dairy products"* chain, includes the following elements:

- ✓ **production of feed** needed as raw material in the milk cows farm;
- ✓ **milk production** which is raw materials used in milk processing plant;
- ✓ **milk collection;**
- ✓ **milk processing;**
- ✓ **storage of milk and milk products;**
- ✓ **trade of finished products.**

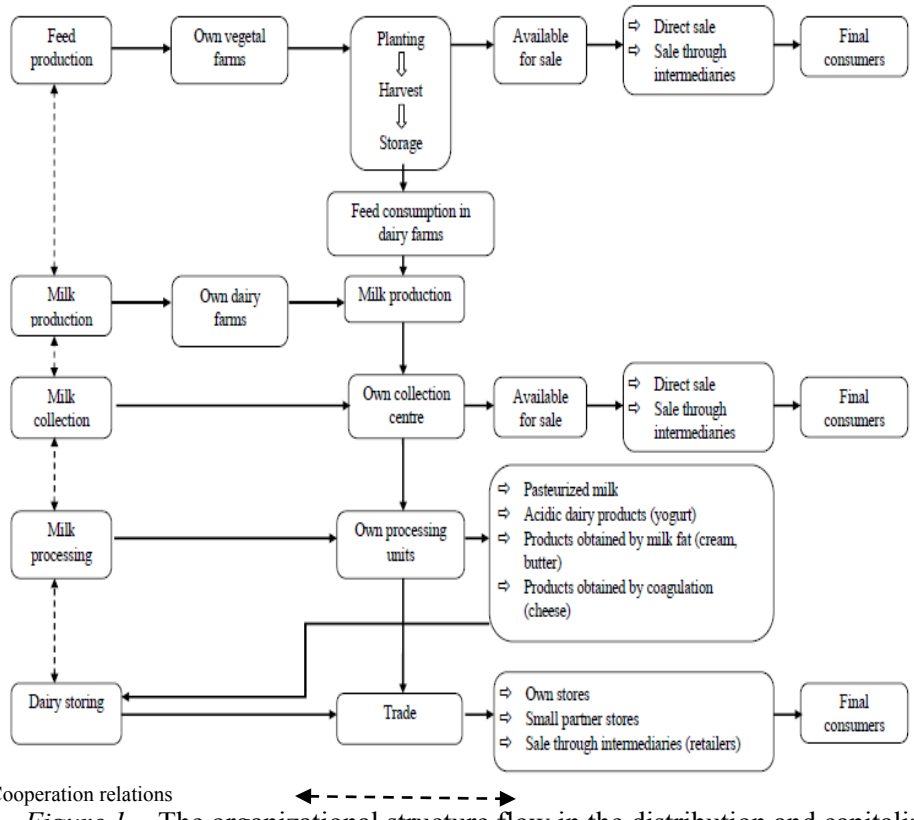


Figure 1 - The organizational structure flow in the distribution and capitalize process, specific for the integrated units from the product chain *"milk and dairy products"*

Among these elements are relations of cooperation, the information flow in both directions.

The excess feed or milk produced is for sale on the open market (Fig. 1).

CONCLUSIONS

1. The small units in the chain of product *"milk and dairy products"* are facing major problems with the financing activities, modernization, quality and competitiveness of products, distribution and capitalization of finished products, etc.

In the absence of an associative organization, to handle the collection, storage and trade of the products, and also the economic organization of producers to eliminate intermediaries and speculators, the producers will not be able to compete with the internal and external competition on the market.

2. In large enterprises, the access to financing schemes is higher, so they can better adapt to market demands for quality and safety products. For a high economic efficiency, these companies can turn to the agro-food integration, in order to be coordination between the links in the chain *"milk and dairy products"*, to create a powerful feedback mechanism to communicate with the market requirements.

3. The market orientation and diversification of dairy products *(traditional, organic and other niche products)* are essential requirements for producers and processors if they wish to have access to the EU market. These products can be effectively promoted through participation in national and international fairs and exhibitions in the field.

REFERENCES

1. **CERVANTES-GODOY, D., J. DEWBRE** (2010) - Economic Importance of Agriculture for Poverty Reduction, OECD Food, Agriculture and Fisheries Working Papers, No. 23, OECD Publishing. http://www.oecd.org/dataoecd/32/50/44804637.pdf
2. **CHIRAN A.** şi colab. (2004) - Piaţa produselor agricole şi agroalimentare – abordare teoretică şi practică. Ed. CERES, Bucureşti.

3. **CHIRAN A., GÎNDU ELENA** (2007) - Zooeconomie. Ed. PIM, Iaşi.
4. **CHIRAN A., POPOVICI FLORINA, GÎNDU ELENA** (2007) - Noi orientări privind producția de lapte din zona preorășenească a municipiului Iaşi, în contextul normelor impuse de Uniunea Europeană. Lucr.şt.USAMV Iaşi, vol. 50, seria Zootehnie ,ISSN 1454 - 7368.
5. **CONSTANTIN M.** (2007) – Marketingul producției agroalimentare. Ediția a VI-a, Ed. AgroTehnica, Bucureşti.
6. **CRAWFORD I.M.** (1997) - Agricultural and Food Marketing Management. Food and Agriculture Organization of the United Nations, Rome.
7. **DROBOTĂ BENEDICTA** şi colab. (2009) - Informatics model regarding the analysis of some technical and economic indicators in animal husbandry. Lucr.şt.USAMV Iaşi, vol. 52, seria Zootehnie, pag. 146-152 ISSN 1454 -7368.
8. **GÎNDU ELENA, CHIRAN A., MĂLĂŞINC J.** (2005) - Organizarea producției agricole în sistem integrat (studiu de caz în arealul rural Vetrişoaia-Berezeni-Fălciu). Lucr.şt.USAMV Iaşi, vol. 48, seria Agronomie. ISSN 1454-7414.
9. **GÎNDU ELENA** şi colab. (2001) - Aspecte privind marketingul laptelui si a produselor lactate la Societatea Agricola "AGROIND" Berezeni, judetul Vaslui. Lucr. st., U.S.A.M.V. Iasi, vol. 44, seria Agronomie. ISSN 1454-7414.
10. ***) (2011) - The importance of milk and dairy products as part of a healthy balanced diet, available on-line at: http://www.milk.co.uk/page.aspx?intPageID=131.
11. ***) (2004) - Producția şi sistemele de valorificare a laptelui şi produselor lactate. Rev. Rodul pământului, nr. 87, http://www.rodulpamantului.ro/productia-si-sistemele-de-valorificare-a-laptelui-si-produselor-lactate_1023.html.