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Economic aspects of innovation and the transfer technology for the chicken products enriched with nutrients

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Abstract The level of nutrients of the food products generates the quality of them and the essential method for the resolving of the consumer's. The quality of food products is a means used for a certain purpose, according to which a company or an economic agent exists on the market and it can remain competitive continuously although it develops in a changing environment. The study welcome of the actual tendency by the supplementing of the processing food. Besides the scientific research, the innovation program consists of a series of projects which promote the innovative management techniques which need an integrated approach similar to the general strategy of the organization. The advancement of technology has three phases: invention – the creative act where by an idea is conceived, innovation – the process by which the invention or idea is brought into successful practice and diffusion- the successive and widespread use of innovation.

Keywords: innovation, transfer technology, functional food

1. Introduction

Besides the scientific research, the innovation program consists of a series of projects which promote the innovative management techniques which need an integrated approach similar to the general strategy of the organization. The advancement of technology has three phases: invention – the creative act where by an idea is conceived, innovation – the process by which the invention or idea is brought into successful practice and diffusion- the successive and widespread use of innovation.

2. Experimental

The term "innovation" means the novel ways of organizing, resulting in new products or processes bringing extra value for the firms when innovations can be either radical or incremental. So that, innovation are assumed to include product innovations, process innovations, organizational innovations and marketing innovations.

There are three main drivers of innovation: technological advances, changing customer needs, and shortening products life cycles.

According to experts view, 80% of new products in the world are market-pull and only 20% are market push [2].

Market - pull approach to technology and knowledge transfer is demand drive and provides the opportunity for more rapid diffusion of innovations. In market-pull knowledge transfer there is an existing demand from absorptive firms for the knowledge. Evidence from innovation research argues that the economic benefits of innovation will be realized more quickly and the return on investment of public funds will be greater in cases where there is a rapid uptake of knowledge in industry.

The economics of user innovation is worth to concentrate users innovative because they often have a higher benefit from an innovation than manufacturers and users also often innovate at lower costs than manufacturers. According to this theory, innovations developed by lead users have high commercial value. Innovations are more and more user-centered. Manufacturers identify user needs, develop products at private expense, they profit by

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protecting and selling what they have developed. Lead users innovate to solve their needs at private expense and then freely reveal their innovation. The lead user method is a tool to identify and integrate lead users into concrete innovation projects of a company.

As users have needs, they tend to innovate to fulfill those needs. The time aspect is a key to understand it – traditional market research identifies what the market wants, whereas lead user research attempts to find out what the market will want, by identifying what users on the cutting edge of the market need and how they satisfy these needs. Contrary to lead customers, lead users are ahead of the market, they are anticipating an innovation rather than just using it since it does not exist yet. If customers can be involved in innovation, it is quicker than concentrating on lead users.

So that, lead users have needs that foreshadow general demand in the market and expect to obtain high benefit from a solution to their needs.

The extension of Kosarom Company Group is represented by SC AVI_TOP SA Company which produces and markets a range of 19 products of poultry meat whose general and specific quality features, physical – chemical characteristics, microbiological condition are registred in the company technical standard and respect the quality conditions from ISO 9000 and EN 24000 series [14].

The financial basis that has to provide the quality control of the raw materials and technological parameters is very well organized for the chicken production farms. So, that analyzing the price calculation (**Table 1**) we can see that supply price don't included the cost of transport because the manufacture has its farms in the same place.

Table 1. Price calculation for the poultry meat

Nr. Crt.	Specification	UM	Value	% from the cost
1.	Cost of raw material	Lei/kg	5.7	67.70
2.	Supply price	Lei/kg	5.7	67.70
3.	Slaughter efficiency	%	81	
4.	Total cost of raw material	Lei/kg	7.0	83.59
5.	Processing cost	Lei/kg	0.8	9.31
6.	Unit costs	Lei/kg	7.8	92.90
7.	Profit	Lei/kg	0.6	7.1
8.	Price en-gross	Lei/kg	8.4	100

The price of the poultry meat including the cost of raw material, slaughter efficiency (81%), processing cost and profit given us a price en-gros by the 8.4 lei/kg.

Slaughter efficiency by the 81% made to increase the cost of raw material at the 7.0 lei/kg. The processing cost represents 9.31% and the profit 7.1%.

As a innovation the new recipes proposes for the research are the following: 1. meat poultry with fruits SP1 - Poultry meat 400 g, onion 50 g, orange juice 30 ml, apricot 60 g, raisins 50 g, curry 5 g, oil 20 mL, salt 20 g, pepper 5 g and 2. meat poultry roles with vegetables SP2 – Flour 500 g, water 300 mL, salt 3g, eggs 300 g which formed pancakes added minced meat poultry 200 g, peppers 50 g, onion 20 g, broccoli 50 g, cheese 100 g, mushrooms 100 g 3. meat poultry with raisins SP3 – Poultry meat 500 g, sugar 5 g, starch 10 g, raisins 250 g, flour 10 g, rusk 20 g, savory 5 g, 4. poultry meat with green beans SP4- poultry meat fine paste 300 g, parmesan 100 g, garlic 5 g, savory 5 g, white wine 10 mL, green beans 100g, eggs 100 g, vegetable marrow 300g [7]. **Table 2** show the cost of semi-manufactured poultry products.

Table 2. The cost of semi-manufactured poultry products

Nr. Crt.	Specification	Value SP1 Lei/ kg	Value SP2 Lei/ kg	Value SP3 Lei/ kg	Value SP4 Lei/ kg
1	Cost of raw material	4.7	5.7	5.3	5.1
2	Supply price	4.7	5.7	5.3	5.1
3	Slaughter efficiency	81	81	83	83
4	Total cost of raw material	5.7	7.0	6.4	6.2
5	Processing costs	0.9	1.0	1.0	0.9
6	Unit cost	6.6	8.0	7.4	7.1
7	Profit	0.4	0.6	0.4	0.5
8	Price –en - gross	7.0	8.6	7.8	7.6

The cost of transfer technology from the poultry meat products to the semi-manufactured products as a functional food is indicated in **Fig 1** and the the processing costs of semi-manufactured poultry products after the production of series are presented in **Fig.2.**

We can see that the technology transfer realized with costs higher than the poultry product between

2.8 – 3%. This increasing would generated products price with 2-3 % more less or products with smaller profits.

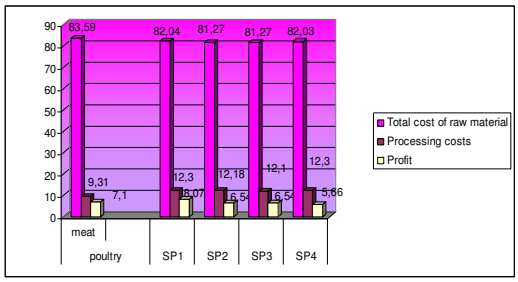

Fig.1 – Dynamic of element costs for the semi-manufactured poultry products

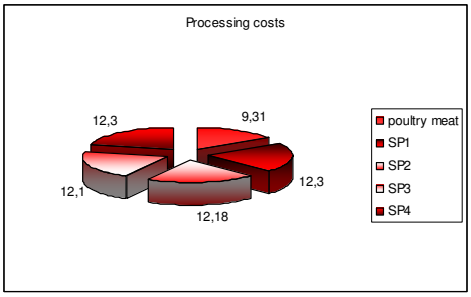

Fig. 2 - The processing costs of semi-manufactured poultry products after the production of series

3. Results and discussion

Each National Research and Education Network is unique and the same applies to its business model. New ventures are founded, employment rate increases, the region's or country's or Europe's competitiveness rises. It seems there are some problems in common to be solved because there are far too few start-ups based on the transfer of publicly funded know-how in the whole Europe.

The playground of such an organization is probably determined by two ultimate points of view in the field of creation of results to be transferred. Firstly, the costs connected to research and development are covered from public funds and therefore, it is the organization' s obligation to spread the results as much as possible – it also means possibly without any financial benefit.

There are in general important revenue streams in the case of offering free products. Sometimes, free option results in global spread of customers and results in free customer feedback and product improvement initiatives. Possible benefits could be joined research cooperation with the receiver of the technology bringing new quality of the research the organization won't is able to aim itself.

Secondly, the manufacture received public funds in order to make use of the results for itself; it means to commercialize the results on its own.

As the holders of public funds are obviously a very special kind of stakeholders, it is worth investigating the nature of relationships between them and the described institutions.

Based on this experience, SC AVI_TOP SA [12] from Iasi county decided to enable the use of its research results by offering o non-exclusive license without equity stock in the technology recipient's company. The license fee was based on the two-year agreement with an initial fee and regular fees based on the results. According this relation sheep established firm has a variety of advantages in commercializing university technology. Therefore most university technologies are licensed to existing companies, the proportion o spin-off – inventions being developed in universities is very low. The likelihood that spin-off will be created depends on the kind of technology. So that, the university spin – offs tend to be founded to exploit technologies that the radical, tacit, early stage and general-purpose, which provide significant value to customers, represents major technical advances and have strong intellectual property protection.

The technology was rather incremental, documented in written form, operating prototype, rather moderate customer value and IP protection only by security [6].

4. Conclusions

1. SC AVI-TOP SA Iasi will have replace the technologic equipment with the specific one' s that will create a secure production flow to obtain high quality of semi-manufactured poultry products with vegetable or fruits.

2. The level of the total costs of raw material are estimated at the 82.04% for the semi-manufactured poultry product result from 1 recipice and it is an increasing of 4.7% more than the cost of raw material in the calculation price for the poultry meat.

3. The processing cost represent 12.1- 12.3% at the sample 1 – 4.

4. The profits of semi-manufactured poultry products there are 8.07 %, 6.54 % and 5.66 % presently 7.1% for the poultry meat.

5. The transfer cost of innovation at the semi-manufactured poultry meat products increased with 2,8 – 3% more than at the poultry meat products.

6. The spin – off would generate price of products with 2-3 % more increasing or products with smaller profits.

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