

## INNOVATIVE AGRICULTURAL BUSINESSES – ELEMENTS OF AN EFFICIENT FARM MANAGEMENT

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### Abstract

Innovation is one of the neo-factors with the greatest influence on building or enhancing a competitive advantage in all fields of activity, including the agricultural sector. Innovative agricultural businesses are the ones that ensure differentiation in relation to competition and are the main sources of added value in a dynamic economy. Innovation is one of the attributes of the entrepreneur. Business ideas that identify new products, new features or usage patterns as well as new market niches are tools that help ensuring successful management of the farms concerned. The paper aims to identify a series of innovative business ideas related to agricultural and agri-food activities, to provide examples of good practices associated with these businesses and to analyze the importance of innovation at European, national and local level. The study highlighted the direct correlation between innovation and performance, the Research and Development department of each enterprise gaining increasing importance related to the production department. Firms that did not adapt to the ever-changing environment and did not adopt differentiation strategies have involved or stagnated economically while companies that have come up with new products or presentation methods, new technologies and processing systems have considerably improved their economic results by becoming leaders in the segment targeted by them. Growing lavender, planting peanut, natural juice factories or cultivating and processing medicinal plants are some of the innovative businesses identified that have developed and brought to the entrepreneurs great results and to customers new products and services adapted to their needs.

**Key words:** innovation, agricultural business, farm management, agri-food sector, performance

Management is a science, respectively a systematized body of laws, principles, theories, instruments and requirements that must be respected in the process of effective management of the company's activities which have as a final objective the profit (Radu E. *et al*, 2003).

The agricultural farm represents the basic economic unit for the agricultural production consisting of agricultural land and/or the enclosure in which are the constructions, storage spaces, agricultural machinery and equipment, other annexes, animals and birds, as well as the related utilities that contribute to the agricultural activities. (Brezuleanu S. *et al*, 2017).

Farm management is fundamentally focused on how the farmer obtains and uses the essential means (land, labor, capital, time) that he has in order to achieve a certain number of objectives. (Manole V. *et al*, 2001) and today, throughout the world, management is recognized as the most important social sector of progress (Brezuleanu S., 2009).

Research and innovation are crucial tools to achieve a smarter and sustainable agriculture sector (Dovleac Lavinia, Bălășescu, M., 2016) and the

innovation is represented by the ability to continuously transform knowledge and ideas into new products, processes and systems, to the benefit of both the organization and the shareholders. (Popa I. *et al*, 2010).

Achieving the goal of an Innovative Europe requires a new paradigm of mobility, flexibility and adaptability to allow R&D and innovation to create the value that can then support our quality of life. (\*\*\*, 2006, Creating an Innovative Europe)

Innovativeness is a key attitude in any management teams and any firms, thus coming out with new ideas for the competitive advantage and durability of their firms (Zawawi N.F.M., 2016).

Innovation represents the potential for creating wealth from already existing means. In other words, innovation can be defined as that ability whereby a means (in economic or social sense) is found to be used for something new.

Innovation is the specific function of the business initiative; it is the means by which the entrepreneur either creates new wealth-producing resources or endows the existing ones with an increased wealth creation potential.

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## MATERIAL AND METHOD

Material used within this research is formed by European reports regarding innovations and enterprises, Eurostat Databases, data from National Institute of Statistics. The methods used in order to achieve the required results were: statistical data analysis and data interpretation, comparative analysis, case study etc.

## RESULTS AND DISCUSSIONS

Developing a long-term view on agricultural research and innovation (R&I) needs, fosters the overall consistency, sequencing and impact of R&I activities. A strategic approach helps to ensure synergies between R&I activities and other EU policies and set a common direction with Member States and for international research cooperation regarding different strategic priorities and sectors (figure 1). The strategic coordination with Member States is crucial as the resources dedicated to agricultural research and innovation at EU level still represent only about 10% of Member States public investments in the same area.



Figure 1 **Strategic priorities and sectors Horizon 2020**  
(Source: 2018 - Agriresearch factsheet)

Romania, next to Bulgaria, ranks last in terms of the performance of the innovation systems (figure 2, 3). In Romania the largest share regarding innovation expenses allocated to the purchases of machinery, equipment, software and buildings (48.3% in 2016) and only 44.7% on internal or external research-development activities (figure 4).

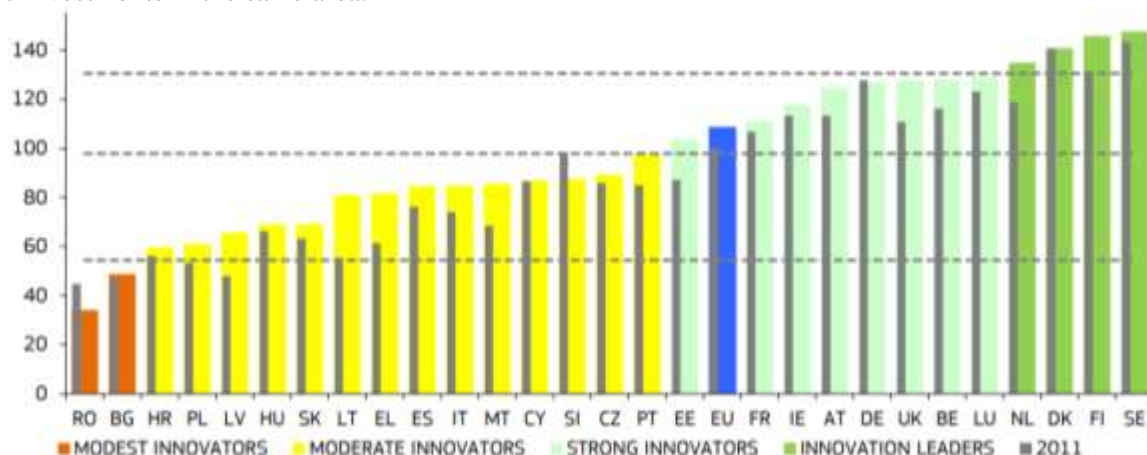


Figure 2 **The performance of the innovation systems of the EU Member States (% of EU average)**

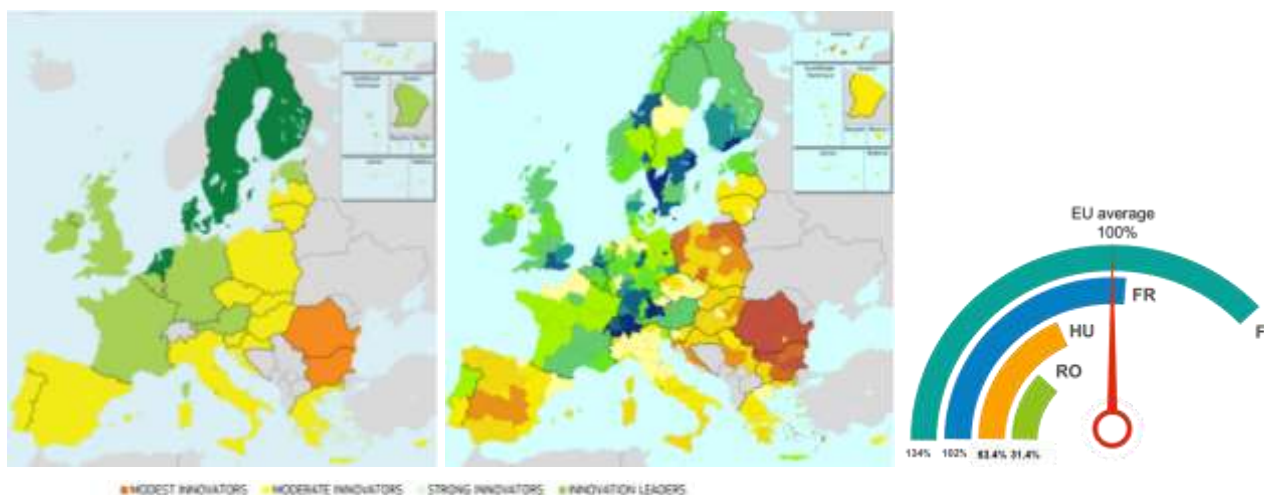


Figure 3 **Comparative analysis of the innovation systems within EU (% of EU average)**

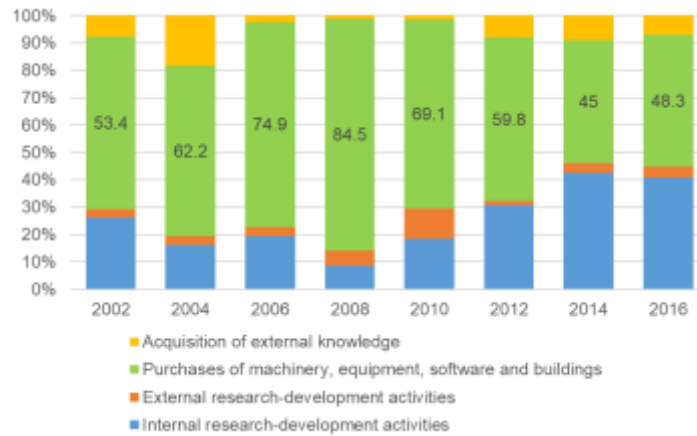


Figure 4 Share of innovation costs of enterprises with product and/or process innovation in Romania

The evolution of the number of innovative enterprises by innovation categories in Romania (table 1) indicates that enterprises only with product and / or process innovation and enterprises

only with organizational and/or marketing innovation represent only 12.7% from the total of innovative businesses.

Table 1

Evolution of the number of innovative enterprises by innovation categories – Romania

	2008		2010		2012		2014		2016	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	29979	100	26330	100	28866	100	28380	100	28809	100
<b>Innovative businesses</b>	9986	33.3	8116	30.8	5968	20.7	3645	12.8	2925	10.2
Enterprises only with product and / or process innovation	1951	6.5	1137	4.3	541	1.9	988	3.5	721	2.5
Enterprises only with organizational and / or marketing innovation	4079	13.6	4353	16.5	4162	14.4	1805	6.3	1369	4.8
Companies with product and / or process innovation and organizational and / or marketing innovation	3956	13.2	2626	10	1265	4.4	852	3	835	2.9
Successful innovators	5748	19.2	3631	13.8	1691	5.9	1529	5.4	2795	9.7
Product-only innovators	710	2.4	635	2.4	351	1.2	313	1.1	430	1.5
Process-only innovators	1965	6.6	955	3.6	706	2.4	511	1.8	478	1.7
Product and process innovators	3073	10.3	2041	7.8	634	2.2	705	2.5	518	1.8
Innovators with unfinished and abandoned activities	159	0.5	132	0.5	115	0.5	311	1.1	130	0.4
<b>Non-innovative businesses</b>	19993	66.7	18214	69.2	22898	79.3	24735	87.2	25884	89.8

Source: own calculations using NIS data

The structure of innovative enterprises by size classes (table 2) indicates a constant decrease in all three types (small, mediums and large). The

share for medium enterprises was 42.5 % in 2008 and only 12.2 % in 2016 (a difference of 30.3%).

Table 2

Innovative enterprises by size classes - Romania

Size class	2008		2010		2012		2014		2016	
	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	1250921	50.8	978724	50.2	722351	35.5	470656	23.2	338092	16.2
<b>Small</b>	171063	31	125532	28.5	89037	19.3	55655	12.4	42539	9.3
<b>Mediums</b>	291588	42.5	201053	40.5	147923	27.1	87185	16.2	68887	12.2
<b>Large</b>	788270	64.5	652139	64.5	485392	47.2	327816	31.5	226666	21.2

Source: own calculations using NIS data

One of the most common innovative business ideas met in the projects and still addressed by many successful managers was lavender which has an initial investment of approximately 5000 euros/ha and a yield of 5000 kg/ha. The profit obtained is about 8000 de euro/ha and the investment has a payback period of 2-3 years (figure 5).



Figure 5 Lavender

Another innovative business but more rarely encountered in Romanian agriculture is hazelnut

tree plantation (*figure 6*) with an initial investment of approximately 3000 euros/hectare and a payback period of the investment between 3 and 5 years at a yield of 450 kg of peanuts/ha.



Figure 6 Hazelnut tree plantation

Natural apple juice factory is another innovative agricultural business indicating an efficient farm management. The investment is about 10000 € and the installation for a small factory 3000-4000 euros. The price of natural apple juice is 6-8 lei per l (*figure 7*).



Figure 7 Natural apple juice factory

Sea buckthorn is widely distributed all over the world. It contains different kinds of nutrients and bioactive substances such as vitamins, carotenoids, flavonoids, free amino acids and elemental components etc. The clinical trials and scientific studies during the 20th century confirm medicinal and nutritional value of sea buckthorn. Initial investment for Sea buckthorn is estimated at 1500-3000 euros/ha. The yield is approximately 15-20 t/ha (from year 3) and the price on the market is 10 -20 lei/kg (*figure 8*).



Figure 8 Sea buckthorn plantation

## CONCLUSIONS

Innovation is one of the attributes of the entrepreneur. Business ideas that identify new products, new features or usage patterns as well as new market niches are tools that help ensuring successful management of the farms concerned. Firms that did not adapt to the ever-changing environment and did not adopt differentiation strategies have involved or stagnated economically while companies that have come up with new products or presentation methods, new technologies and processing systems have considerably improved their economic results by becoming leaders in the segment targeted by them. Growing lavender, planting peanut, natural juice factories or cultivating and processing medicinal plants are some of the innovative businesses identified that have developed and brought to the entrepreneurs great results and to customers new products and services adapted to their needs.

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