

## A PRIORI STUDY OF MARKETING INNOVATION STRATEGIES OF AGRICULTURAL ENTERPRISES IN BULGARIA

*A retrospective analysis of the three waves of biological, conventional and GMO innovations in agriculture has been elaborated. The results lead to the conclusion that there is a huge potential for development of innovations in the field of GMO and bio-products worldwide. The objective of this study is to make an a priori study of marketing innovation strategies of agricultural enterprises in Bulgaria. The major difficulties impeding the diffusion of innovations in our agricultural sector have been explored – inefficient agricultural markets; poor: national and fiscal policy, infrastructure, research and development activities, etc. The role and importance of innovations for the survival and development of agricultural enterprises has been clarified – improving user satisfaction, countering competition and achieving higher profitability, overcoming climate change, seasonality and cyclicity of agricultural processes. The most common reasons hampering innovation processes have been indicated – lack of market knowledge, inappropriate management and high degree of uncertainty and risk of innovations in agriculture. The factors that determine the success of innovations in agricultural enterprises have been analysed: discovery of new markets, appropriate national policy and environment, development of innovation strategies through various forms of joint marketing and clusters to take over the major part of marketing activities in the field of innovations (product-, process-, organizational innovations and their complex effect on marketing innovations) for entering new national and international markets. The problems related to marketing innovations on meso and micro levels have been discussed – underdeveloped branch organisations and communities, low use of contemporary information systems and technologies, poor integration with the research, development and other similar units. The opportunities for marketing innovations on meso and micro level have been defined in terms of products and product structure of agricultural enterprises, distribution and logistics, communication and pricing. Conclusions and major results have been established.*

*JEL: M39; Q13; Q16*

According to data from the World Trade Organization (WTO) for 2008, revenues from the turnover of foods worldwide rank third right after trade with petroleum

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products, steel and iron.<sup>2</sup> The agricultural sector is the main source of food, beverages and raw materials for the industry and is based on the three main types of agricultural production – transgenic, conventional and biological.

### Aspects of Innovations in Agricultural Enterprises

*Transgenic* agricultural products or genetically modified organisms (GMOs) have been produced for several decades, *conventional* for centuries and *biological* agricultural products for millennia. Innovations in transgenic agricultural products are mainly introduced the genetic code of plants, animals and microorganisms, by importing *foreign genes*. Innovations in conventional agricultural products are introduced by means of production technologies (mechanisation, chemisation, selection, etc.), while in bio-products innovations are aimed at creating organic agricultural products without the use of GMOs, chemisation and others. Some of these innovations are generated by the agricultural market for the provision of agricultural products with specified quality and another part is generated from scientific development and achievements in other economic sectors such as chemistry, mechanical engineering, biotechnology, food industry and others. Some innovations are created in the agriculture sector itself – bio-products. Various innovations in the field of GMOs, conventional and bio-products are the result of interpenetration of innovations in product varieties, breeds, technologies, agricultural technics, agricultural chemistry and others, which leads to their great variety in food and beverages.

Being relatively new, genetically modified agricultural products are more resistant to pests and pesticides, thus increasing yields and reducing production costs, providing strict quality and increasing the competitiveness of agricultural producers. *The risks* posed by GMOs are associated with the fact that *genetic changes can create and produce new and unknown strains and mutations, cancers, reduced fertility and biodiversity, resistance to certain drugs and chemicals, allergies and others*.<sup>3</sup> GMOs are profitable crops used widely in food processing and manufacturing, being the alternatives to many conventional agricultural and non-agricultural products. They imply more profitable agricultural production.

The major producers of GMOs are the U.S. (over 64 million ha), Brazil (over 21 million ha), Argentina (over 21 million ha), India (more than 8 million ha), Canada (over 8 million ha), etc. According to the World non-government organisation for technologies in biological agriculture, 14 million agricultural producers have planted 134 million hectares of GMOs in 25 countries in 2009. Manufacturers have

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<sup>2</sup> Capital (newspaper). 2010. 30 January – 5 February; www.wto.org [Accessed May 2010].

<sup>3</sup> Agricultural producers cultivating GMOs fall under the aggressive policy of multinational corporations that hold patent rights to genetically modified agricultural products, thereby forcing agricultural enterprises to use specific seeds, fertilisers and chemicals for each type of crop. Even agricultural producers, which do not grow GMOs fall under the influence of the same multinational corporations because of their patent rights and claims for the entry of these cultures on territories which do not grow GMOs. Agricultural producers which do not cultivate GMOs fall under strong competitive pressure from GMO products.

increased more than 80 times since 1996, when GMOs were first introduced.<sup>4</sup> In 2006, the U.S., Canada and Argentina have filed a complaint against the EU in the WTO, which has received support from the organisation, but has not mitigated the position of GMOs opponents in the EU.<sup>5</sup> The EU currently has no clear policy for the future of GMOs, but animal agricultural producers in the community are highly dependent on the import of GMO fodder for chickens and cattle. The outcome of this battle in the future will depend on the extent to which prices of food and fodder will continue to rise. As far as the GMO issues are concerned, the world is divided in two sides – the EU being an opposition, and the U.S., multinational biotech corporations and third world countries being in favour of their development. For now, GMOs are more easily produced in places where food is a luxury, not a choice.

As new agricultural products, *GMOs open many new opportunities for developing new drugs and vaccines, milk and meat products with new properties* (milk with lower water content, meat rich in beneficial fatty acids) and others. **GMOs have the potential to change agriculture in a revolutionary way** and create a new agricultural revolution that will generate new industries and innovations in food processing, trade and others. In Bulgaria, GMO innovations have mainly been applied in crop production, while even at the moment, animal farming is focused mainly on selection. The Agrobiointitute at the Agricultural Academy (AA) has developed technology for GMO<sup>6</sup>, but currently there is an acting moratorium on the production of GMOs. Presence of GMOs above 0.9% should be indicated at the labels of food and fodder, supervised by the Bulgarian Agency for Food Safety (BAFS<sup>7</sup>). The EU has strict rules on labelling of GMO<sup>8</sup> and certified bio products. The official policy of American Institutions for the labelling of food and fodder does not require the indication of GMO on labels, thus depriving consumers of their informed choice.

Another relatively new kind of agricultural products, which are the result of new reproductive techniques, is *cloned* plants and animals. At this stage they are still more expensive than GMOs, conventional and bio products thus having no market share, but it is believed they will have a very important role in the future to fight certain diseases, because they ensure the achievement of strict quality of agricultural products.

Currently *the production of conventional agricultural products has been best developed in terms of quantities produced worldwide*. Innovations in the field of agro technology, selection, agro chemistry and agricultural technologies in general have led to the multiplication of crop yields and livestock productivity. The quantitative accumulation of innovations in the field of conventional agricultural products has created new agrarian relations and has caused agrarian revolution that has created new industries and innovations in their processing and marketing.

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<sup>4</sup> www.isaaa.org [Accessed December 2010].

<sup>5</sup> Capital (newspaper). 2010. 28 August – 3 September.

<sup>6</sup> www.abi.bg [Accessed March 2012]; www.agriacad.bg [Accessed March 2012].

<sup>7</sup> http://bahh.government.bg [Accessed May 2012].

<sup>8</sup> Regulation (EC) No 1829/2003; Regulation (EC) No 1830/2003.

Many innovations have emerged in food industry – chemical preservatives, colourings, emulsifiers, etc., marked with different types of E-numbers to create food and beverages with new features (better commercial attractiveness and durability). New applications of traditional agricultural raw materials for new products have emerged – sausages and cheese from plant materials, biofuels and others. New standards were introduced to ensure quality and safety of food and beverages – HACCP, ISO 22000, IFS, BRC. Many European and national programs stimulate innovations in the field of "green" energy, food and beverages – Common Agricultural Policy (CAP) of the EU and others. Agricultural markets of conventional agricultural products, with their numerous innovations are characterised by the presence of approved foods and beverages with high added value and global brands.

Bio products are the well forgotten old products from the dawn of the agrarian sector. They require compliance with strict production technologies and standards, bio certification, packing and labelling. Bio products have proved to be safer and more palatable than conventional and GMO products. They generate innovations in food processing and marketing of foods and beverages because they require new biotechnology, standards, packaging and market segments while at the same time ensuring strict biological qualities that GMO and conventional products do not provide. The number of bio product producers in the country grew more than 4 times in the last five years.<sup>9</sup> The EU has strict requirements for the production and marking of bio products.<sup>10</sup> Production must meet certain standards and be certified by an independent body. Since July 2010, manufacturers and suppliers of bio products in the EU are required to use a special logo. The EU is the largest and most developed market for bio products.<sup>11</sup> Bio products are more expensive than conventional and GMO, but provide an opportunity to create products with high added value and brand. They integrate fully in the social and ethical marketing concept and provide new opportunities to establish lasting relationships with their consumers.

The main weakness of the bio production in the country is caused by the fact that it does not sell finished products, but mainly exports agricultural biological raw materials for foreign markets, resulting in lost revenues from added value and the inability to develop its own brands, which restricts innovations in food processing, trade and others. Over the past 4-5 years Bulgarian stands and shops for bio products have been created (mainly in the capital and largest cities), but still there is a significant lag of innovations in the field of agricultural marketing of bio products.<sup>12</sup> The market for bio products is one of the fastest growing markets globally, while

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<sup>9</sup> Capital (newspaper). 2011. 11-17 June.

<sup>10</sup> Council Regulation (EEC) No 2092/91 on organic production of agricultural products and indications.

<sup>11</sup> [www.organicmonitor.com](http://www.organicmonitor.com) [Accessed February 2011].

<sup>12</sup> At present less than 0.5% of the utilised agricultural area in the country ("Bioselena" foundation, <http://www.bioselena.com> [Accessed March 2012]) is used for certified biological production. Biological products as % of the trade in food and drink are even less. GMO production is 0%, which implies that over 99% of agricultural products in the country are conventional.

*Bulgaria has significant opportunities and potential to develop its bio farming industry into a leading agricultural sector.*

*The markets of GMOs and bio products worldwide will continue to grow in the coming decades, and along with them – the innovations in technologies and standards for agricultural products – transgenic, cloned, biological, conventional and others. New industrial uses of agricultural raw materials will be discovered and new functional foods and beverages with medicinal qualities will be developed. Agricultural producers, processors and retailers will develop and use new marketing strategies and marketing tools by means of new packaging, labels, brands and others. These innovations will require and necessitate a change in national agrarian policy and will form new concepts and models of agricultural marketing and respectively will change the innovative marketing strategies of agricultural enterprises in Bulgaria.*

Agricultural marketing as a concept for managing the overall activities of an agricultural enterprise is the dominant overseeing all other activities – from planning of agricultural production to the consumer plate. This explains why some of the relevant innovations go beyond the scope of marketing of agricultural products, but otherwise both are related. Therefore the main objective of this study is an a priori research of the innovative marketing strategies of agricultural enterprises in Bulgaria.

### **Opportunities for Innovations in Agricultural Enterprises**

At present, Bulgarian agricultural enterprises are predominantly small and fragmented, cut off from the markets and having difficult access to relevant and up-to-date market information. They produce mainly agricultural raw materials with low degree of differentiation, added value and purchase prices with increased volatility. The entities following the agricultural producers – mainly food processors and traders are more competitive. Agricultural production in Bulgaria is characterised by a large grey sector, power groups and cartels in processing, pricing and trading of agricultural products, which has a very negative impact on the development of agricultural marketing.

The Global Competitiveness Index, calculated by the World Economic Forum, is based on 12 criteria that influence competitiveness: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, market size, technological readiness, business sophistication and innovation.<sup>13</sup> **The most serious problem for the Bulgarian economy appears to be innovations** because they have the lowest score of all 12 key criteria. Another problem is the lack of cooperation between agricultural business and research institutes within the innovation process. One of the main objectives of the new EU CAP for the period 2014-2020 is innovation, but for the Bulgarian agriculture, it will be an aim hard to reach because of the lowest levels of investments as compared to

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<sup>13</sup> www.weforum.org. The Global Competitiveness Report 2011-2012, [Accessed April 2012].

all other sectors in the economy, the inefficient agricultural markets, the poor infrastructure, poorly functioning institutions, inaccessible financial services and others. Bulgarian agriculture is net exporter of agricultural raw materials, but there is a lasting downward trend of the share in gross value added. It has turned out that all the improvements gained through efficiency, are lost because of lack of innovations.

Innovations in agricultural enterprises are objectively less dynamic as compared with companies in the industrial and services sector, due to slower growth rates and greater conservatism and inertia in the development of agrarian sector. The main generators of innovations in the agricultural sector are enterprises from the sectors of trade and processing of agricultural products, higher education institutions (HEI), research and development units, government institutions, large multinational companies in the agricultural business, which are highly integrated with other economic sectors. The Bulgarian literature on agricultural marketing (Kabov, 1993; Mishev, 1996; Trendafilov, Simova, 2001; Stanimirova, Stanimirov, 2008; Banabakova, 2010; Tsyarkin, Lyukshinov, Erishvili, 2000; and others), and the one associated with it, *lacks information and clear formulation of the problem of innovations in this specific field.*

It is noteworthy that the national marketing structures of the EU Member States oriented towards the agrarian sector<sup>14</sup> (in Bulgaria there is no such specialised unit for agricultural marketing (Lyubenov, 2010, p. 266-269)) are aimed primarily at *supporting the national and export marketing of agricultural products* – research, national advertising and PR campaigns to establish international image, sales and traceability, quality marks and others. Innovations are outside their main objectives, although they provide some indirect support in this field.

As a positive example in the EU we can indicate the Netherlands, which at the end of 2010 has merged the Ministry of agriculture, nature and food quality with the Ministry of economic affairs to form a new Ministry of economy, agriculture and innovation.<sup>15</sup> At European level there are many research works devoted to innovations in agricultural business<sup>16</sup>, but the field is lagging behind the research and applications of innovations in other sectors of the economy – industry and services. In the EU, and respectively in Bulgaria there is also a lag in the practical application of innovations in the field of GMOs. The above indicates the *presence of significant barriers to entry for innovations in Bulgarian agricultural enterprises.*

Agricultural producers should seek ways for overcoming these difficulties, because *innovations are very important and have an essential role to their survival.* Consumers' needs change, requiring a reciprocal change in agricultural products – a shift from conventional to bio farming and/or new varieties and breeds. Under

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<sup>14</sup> <http://www.ama-marketing.at>, [Accessed April 2012]; <http://www.agromarketingsuisse.ch>, [Accessed April 2012]; <http://www.sopexa.com>, [Accessed April 2012]; <http://www.italtrade.com>, [Accessed April 2012]; <http://www.icex.es>, [Accessed April 2012]; <http://www.vlam.be>, [Accessed April 2012]; <http://www.finpro.fi>, [Accessed April 2012]; <http://www.bordbia.ie>, [Accessed April 2012]; <http://www.portugalbusiness.net>, [Accessed April 2012]; <http://www1.foodfromsweden.com>, [Accessed April 2012]; <http://www.defra.gov.uk>, [Accessed April 2012] and others.

<sup>15</sup> <http://www.rijksoverheid.nl/ministeries/eleni>, [Accessed April 2012].

<sup>16</sup> [http://ec.europa.eu/research/agriculture/index\\_en.html](http://ec.europa.eu/research/agriculture/index_en.html) [Accessed March 2012] and others.

pressure from competitors and particularly from price competition which most often dominates the global agricultural market, profitability in the agricultural business has begun to decline. In the case of seasonal nature of production, which is the case for agriculture, *innovations can lead to significant reduction of cyclic production and sales and to better utilisation of created potential. Climatic changes lead to the creation of new varieties, breeds, technology, etc.* Innovations can create new market opportunities – penetration of new markets, expansion of existing markets and others.

Experience shows that **the majority of new products** (well forgotten old ones or products where there are either small or significant changes) in all economic sectors – agriculture, industry and services **undergo a market failure**. There are many reasons for this failure, but apart from globalisation, technology development and Internet, which have led to the intensification of competition at all levels and markets, the failure of new products may be caused by many other factors. For example, insufficient knowledge of the market in terms of size, absorption, and consumer preferences. Higher than expected costs (production, marketing, etc.) Errors in the application of some elements of the marketing mix – product, price, promotion, communication and others. Poor management of innovation processes. High degree of uncertainty of innovations, significant risk and others.

The wide variety of reasons for market difficulties and failure of new products require that agricultural producers have a very good knowledge and account for **the factors that determine the success of innovations**. There is a need for continuous monitoring of market and technological trends and novelties. *Development of innovative marketing strategies with appropriate marketing tools. Creation of the right environment for innovations on behalf of the national government.* The terms of business environment are crucial for the development of the innovation potential of the agrarian sector – AA, HEI, research units, legislative and regulatory framework, tax incentives, established business practices and others.

Agricultural enterprises should observe and analyse not only the existing markets, but also seek or create new markets (the latter is most often accomplished by non-agricultural enterprises) for the produced agricultural products because they are generators and a prerequisite for innovations. Professional education, marketing research, internet and national policy and institutions are very important sources of information in this field.

The availability of a **comprehensive innovation strategy** is important for agricultural enterprises, because the development of new agricultural products is sometimes associated with the use of new equipment and technologies, new forms of organisation and production management, marketing, etc. The introduction of new agricultural products can be done through two main strategies – acquisition or creation. All agricultural enterprises in Bulgaria are using to some extent the strategy of acquisition by purchasing new varieties, breeds, equipment, technologies, etc., but only a fraction of them have the possibilities to implement the strategy to create new agricultural products and innovations related to them. The implementation of both strategies at the level of agricultural enterprise is faced with serious difficulties because it requires significant investments and competencies, which necessitates both horizontal and vertical integration.

Agricultural enterprises can be integrated with commercial and/or processing plants, universities, research and development units. They can also be integrated with each other through some form of joint marketing: marketing boards, marketing cooperatives, producer organisations (Lyubenov, 2010, p. 266-269) and clusters in order to form a suitable environment and strategies for innovations.

*Marketing boards* are producer organisations, which include a significant share of agricultural producers for a certain product in a particular region or country. In Bulgaria, two marketing boards have been constituted: the National dairy board and the Product board for eggs, poultry and rabbit meat. They were created by means of amendments to the Law on livestock breeding on the eve of the Bulgarian accession to the EU, but with the 2010 changes of the law they are removed from it. From their creation until now, both marketing boards do not function well. One of the main reasons is that agricultural enterprises have not been the leading integrator and this role was taken by the state through legislation and enforcement. In 2011, in order to retain the name of the National dairy board, the Parliament decided to suspend its activities until the adoption of a Law on branch organisations in agriculture.

*Marketing cooperatives* are very rare in Bulgaria, and cooperation is primarily on production basis, which explains the focus of our cooperatives for purchasing technological innovations. Still there are no established marketing cooperatives at agricultural enterprise level and those activities are performed mainly by the Central Cooperative Union (CCU), which has operated successfully in Bulgaria since the second half of the last century. The CCU<sup>17</sup> has its own agricultural production, processing factories and developed trade network, and thus has the ability to create innovative agricultural products with high added value.

The creation of *producer organisations* (POs) in Bulgaria has begun under SAPARD and has continued to evolve mainly after the accession to the EU under the terms of the EU CAP. In 2009, there are eight recognized POs for fruit and vegetables and the country has another 26 POs for other agricultural products (Lyubenov, 2010, p. 266-269). POs require a membership of at least seven agricultural producers, adopted statute and rules of procedure and a minimum annual turnover of 200,000 BGN. They specialize in the production of certain agricultural products that meet strict market and regulatory criteria for quantity and quality and as a result they can use funding under the EU CAP. *POs in Bulgaria are having difficulties in finding markets and in reaching the minimum threshold for annual turnover. The reasons are both internal – the lack of own processing and commercial systems and external – unfair intermediaries, imperfect local agricultural markets and others.*

*A cluster* is a group of independent agricultural and non-agricultural enterprises and associated institutions (legal non-profit entities, registered under the Law on non-profit organisations, Bulgarian universities with latest valid grade for institutional accreditation not lower than "good", professional and vocational schools under Art. 26 of the Law on Education, the Bulgarian Academy of Science (BAS) and its institutes and departments, AA and its institutes, experimental laboratories, research

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<sup>17</sup> [www.ccu-bg.com](http://www.ccu-bg.com) [Accessed March 2012].

institutes, municipal and district authorities, financial institutions, etc.) that cooperate with each other while at the same time are in a competitive position. It is a technological and marketing alliance of voluntary interconnected agricultural and non-agricultural enterprises (international practice recommends that the number of enterprises in newly established clusters has to be at least 7) with the same strategic objective and similar geographic location, which as a result of their joint activities can reach a certain threshold of resources and knowledge that lead to sustainable competitive advantage over other market participants.

Enterprises and organisations which are part of a cluster usually belong to different industries connected with each other. Clusters may include the sale of different and complex products, as well as governmental organizations or NGOs, which are usually the most useful objects in the cluster core.

Agricultural enterprises participating in the cluster receive up-to-date information and better conditions for the supply of raw materials. They have access to new technologies and achieve better specialisation and distribution of produce, which creates better conditions for development of innovations in agricultural enterprises. Clusters are well known, established and successful business model in the world (Porter, 2004) for hundreds of years. They are widespread in agriculture worldwide (Galvez-Nogales, 2010).

We can indicate several examples of clusters in the Bulgarian agriculture sector: the National snail farming cluster<sup>18</sup> established in late 2007, the Silk textile cluster<sup>19</sup> established in late 2009, and Agro Dobrudja<sup>20</sup> cross-border cluster established in early 2012 with a three-year Cooperation Memorandum between Bulgarian and Romanian companies in the border region Dobrich – Constanta, including the tourism cluster "Dobrudja" and the innovative products cluster "Ino-Dobrudja".

Most of the clusters in Bulgaria have only formal operations and manage to survive for a short period of time. Part of the reasons for this are internal – lack of entrepreneurial culture and experience in cooperation, while other reasons include less developed agricultural communities, knowledge of agricultural marketing and others. The National snail farming cluster has ceased its operations in 2012 due to mismanagement of the agricultural marketing activities – not established quality standards for snails, high price forecasts, poor distribution policy, etc., which did not allow the cluster to reach its target markets. Example of a properly functioning cluster is the Silk textile cluster, which covers over 80% of Bulgaria's territory and disseminates information among all its members encouraging innovations – production of raw materials for textile industry, creating an own brand and others.

*The cooperation of small agricultural producers in marketing boards, marketing cooperatives, producer organisations and clusters is particularly useful for generating and implementing innovations. They provide an opportunity for exchange of experience on market requirements, introduction of quality management systems and product innovations. They are able to achieve savings through the implementation of common marketing and other innovative strategies.*

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<sup>18</sup> [www.nokbg.eu](http://www.nokbg.eu) [Accessed March 2011].

<sup>19</sup> <http://centerofsilk.wordpress.com> [Accessed February 2012].

<sup>20</sup> <http://www.cbcrbgclusters.eu> [Accessed April 2012].

*They increase the opportunities for creation of agricultural products with high added value. They encourage the introduction of innovations in the fields of branding, communication methods and advertising, pricing, marketing, etc. They increase the competitiveness of agricultural enterprises and their ability to finance innovations.*

### **Marketing Innovations in Agricultural Enterprises**

Agricultural enterprises in Bulgaria do not have possibilities for independent entrance to domestic and foreign markets for various reasons. They have no capacity and capability to meet the required quantities and quality. The majority of agricultural enterprises in Bulgaria do not have marketing competencies, do not speak foreign languages, and do not know foreign and often even the domestic markets. Therefore, agricultural producers in Bulgaria will increasingly create *marketing boards, marketing cooperatives, producer organisations and clusters as approaches to innovations, survival and handling competition.*

*The state, through its policies (agricultural, financial, etc.) and its institutions (Ministry of Agriculture and Food, Agency for Promotion of Small and Medium Enterprises<sup>21</sup> and others) should form a stimulating environment for innovations in agriculture.* It is necessary to provide conditions for innovations throughout the entire value added chain – from the branches at the entrance of agricultural production to the consumer plate. The EU CAP indirectly creates conditions and incentives for innovations in our agriculture by means of: disseminating knowledge and developing human potential and innovations, infrastructure development, sustainable development and others, but as of now they mostly serve larger agricultural enterprises.

The transformation of the objectives of the EU CAP *from quantity to quality*, and for the new programming period towards *innovations*, tends to stimulate the development of innovations. The Bulgarian government still has no clear and comprehensive policy for innovations<sup>22</sup>: Bulgaria takes the second lowest place in the EU-27 with respect to its innovation potential and makes very low expenditures for scientific research and development activities (SRDE) – 0.50% of GDP for 2010<sup>23</sup>, while the EU strategy "Europe 2020" has set up a 3% share of GDP for

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<sup>21</sup> The Ministry of Economy, Energy and Tourism of Bulgaria (<http://www.mi.government.bg> [Accessed May 2012]) envisages that in 2012 the Executive Agency for Promotion of Small and Medium Enterprises (<http://www.sme.government.bg> [Accessed April 2012]) will be restructured or even closed due to inefficient operation as a whole and the field of financing of innovations. Legislative and legal framework for innovations is also inefficient, and a proposal for a new law is being developed to promote innovations.

<sup>22</sup> For five years in a row, before its closure in early 2012, the "Tobacco" Fund has provided more money to finance tobacco production than both the National Innovation Fund and the "Scientific Research" Fund have provided for research and innovation. However, this year, subsidising tobacco growers with national resources continues (70 billion leva), and Bulgaria has also requested approval for subsidies from Brussels for 2013. At the same time, the "Scientific Research" Fund, working as the only state financial instrument is torn from scandals (The Press (newspaper), 2012, 7 May) in the last two years.

<sup>23</sup> Innovation.bg, Report, 2011, Innovation policy and sectoral competitiveness.

expenditures in scientific research, technological development and innovations. *Conducting a directionless, inconsistent and lacking a proper financing innovation policy in Bulgaria reflects upon the extremely low innovation activity of agricultural enterprises.*

*Internet has created a new environment and new opportunities for innovations in agricultural marketing – discovery of new markets and compact market segments, such as farming communities and others. It provides direct and continuous contact with end users, mobile and interactive communications through social networks. It has revealed new forms of branding, distribution, advertising and pricing. It enables the remote management of agricultural marketing activities. The diffusion of smartphones with their high functionality allows agricultural producers to have a permanent Internet connection. Online technologies, mobile networks and social media has provided large access to activities that were previously within the prerogatives of specialized companies and institutions – weather forecasting, business consulting, etc.*

In perspective, an increasing part of the shopping activity will be done online and through various applications for mobile phones. Currently, Internet users worldwide exceeds 2 billion, which shows why every business needs to be digital. Mobile Internet and its increasingly improved parameters, which it is able to provide together with smartphones, will play a major role in the development of a digital economy. About 80% of all Internet users will access the network through a mobile device in 2016 according to a report by the Boston Consulting Group<sup>24</sup>. Unfortunately the majority of agricultural producers in Bulgaria still have a very limited use of the potential benefits, provided by modern information systems and technologies (Lyubenova, 2011, p. 12-20) – Internet, cloud technologies and others – due to the lack of sufficient knowledge and financial resources, poorer infrastructure and limited internet access in rural areas as compared to the enterprises in industry and services. For these reasons, *the online marketing of agricultural products in Bulgaria is still underdeveloped, as well as both marketing and related innovations, based on information and communication technologies (ICT).*

Consumers of certain agricultural products (bio, conventional, etc.) form communities – virtually every manufacturer of agricultural products is also a consumer of these products. New technologies connect and encourage consumers to create communities. Agricultural enterprises should cooperate with members of these communities – working for causes, for geographical indications and trademarks, which have the potential to unite them. Communities may require major changes in agricultural products, such as redirection to biological farming, which can lead to innovations. They also suggest collective shopping – online and offline. Communities can ignore marketing intermediaries and establish direct contacts with agricultural producers, which will require new models of agricultural marketing and respectively new ways of distribution, logistics, communications, pricing and more.

*Consumers (communities) and the establishment of lasting relationships with them have an important role for innovations in agricultural enterprises. A successful*

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<sup>24</sup> Capital (newspaper). 2012. 4-10 February.

example of this is *solidarity agriculture*, which has developed in the middle of last century in Japan, USA and some European countries, and for several years has begun to develop in our country.<sup>25</sup> In this model, a consumer community makes an advance "investment" in agricultural enterprises – certified or not for bio production, which can regularly supply them with fresh agricultural products. The periodic produce is divided evenly among all participants and thus they share both the benefits and risks of poor harvest. Solidarity agriculture creates conditions and opportunities for direct sales<sup>26</sup> of bio and other products. *In the future, consumers will have a stronger influence on innovations of agricultural producers.*

*Branch organisations and unions* as professional agricultural communities form an environment for innovations and provide agricultural producers with access to new and foreign markets. They establish quality standards for agricultural production. They provide up-to-date market information and Internet presence. They have registration and control functions and create prerequisites for the implementation of joint marketing, clustering and others. Many of the branch organisations and unions in national agriculture are not well developed, established and nationally representative except for grain producers, which are the largest agricultural producers in the country benefiting most from the agricultural subsidies. This indicates that *the environment for development and introduction of innovations in the national agricultural enterprises still does provide sufficient incentives, and their innovation strategies and organisational forms are as of now emerging.*

*The management of the classic process of product innovations including its seven main stages* (Kotler, 2002; Lyubenov, 2009; and others) (idea generation, evaluation and selection of ideas, development and testing of the product concept, business analysis, core product development, test marketing and commercialisation) *is applicable at micro level to the industrial and service sectors, but faces serious difficulties and barriers at the level of agricultural enterprises.* The wider introduction of innovations<sup>27</sup> in agricultural enterprises requires certain prerequisites – appropriate institutional and economic environment, good infrastructure and availability of operating agricultural communities to generate various forms of joint marketing (marketing boards, marketing cooperatives, and producer organisations) and clusters to bear the brunt of marketing activities in the field of innovations for entering new and international markets.

Innovations in agricultural marketing can be various and cover a wide range of marketing activities to improve the planning, organisation, implementation and control of marketing activities in agricultural enterprises – *market studies*,

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<sup>25</sup> <http://www.solidarno.com> [Accessed March 2012].

<sup>26</sup> Regulation No 26 from 14.10.2010 on the specific requirements for direct deliveries of small quantities of raw materials and food from animal origin, State Gazette No 84 from 26 October 2010.

<sup>27</sup> There are various classifications of innovations in the literature that are based on different criteria. In general, according to the object of innovation, innovations are: product, process, organisational and marketing. This a priori study covers all four types of innovations and the main aim was to determine their integrated impact on marketing innovation strategies of agricultural enterprises in Bulgaria. It is noteworthy that product, process and organisational innovation exert a significant impact on marketing innovations of agricultural enterprises.

development of *strategies* for entering new markets, etc. They may be related to the development and implementation of new *marketing instruments*, different from the classic 4Ps, such as: 4P + 4П or a new 4P (Lyubenov, Ivanova, 2011, p. 116-120); 4I; 4R and others.

Agricultural enterprises in Bulgaria, which are mostly micro enterprises, are expected to mainly create marketing and organisational innovations. This a priori study has found that they are still underrepresented and underdeveloped **due to lack of marketing competencies** and the above indicated problems. Product and process innovations for the most part are provided through strategies of acquisition – the purchase of new varieties, breeds, agricultural equipment, technologies and others, because of the secured financing and subsidies under the CAP of the EU.

The main generators of product, technological and organisational innovations in the national agrarian sector are the AA and HEIs, while a large part of marketing innovations in the field of agricultural products is accomplished by non-agricultural and foreign institutions and companies – multinational development and business units, etc. Agricultural enterprises in the country mainly produce agricultural raw materials and are not oriented and integrated for joint operations with the institutes of the AA, BAS, HEI, end users and others, *which prevents them from being innovative, growing and profitable*.

Process innovations are the foundation for development of bio products - strict observance of certain technologies. Product innovations are the generator for GMOs – by changing the genetic code. In conventional agricultural products, innovations are sought in mechanisation and chemisation (process innovations), selection (product innovation), organisation and others. All of these innovations inevitably lead to marketing innovations, and they in turn require the selection of appropriate innovative strategies, organisational forms (marketing boards, marketing cooperatives, POs, clusters) and others. Accordingly, the implemented innovative marketing strategies will have their specificity in accordance with agrarian policy and the types of agricultural products – bio, conventional or GMO – with respect to legislative frameworks, target markets, channels of distribution, tools for product advertising, pricing and others.

*Product innovations* may find expression in new plant varieties, new breeds of animals, a shift from conventional to bio or other type of production, i.e. in the development of new products, and respectively new technologies *to streamline the product structure of agricultural enterprises and increase their revenues*. Marketing innovations directed towards popular agricultural products may be linked to implementation of new standards – “Stara Planina”, Global GAP, ISO 22000, biological standards, etc. According to the specificities of the sectoral environment – natural, demographic and others, agricultural enterprises can meet certain conditions and register as users of protected geographical indications (protected designation of origin or geographical indications), or take action to register new ones – in 2011 “Gornooryahovski sudzhuk” was registered in the EU as a protected geographical indication. Based on these innovations, agricultural enterprises can gain better opportunities for differentiation and branding of agricultural products (Lyubenov, 2009, p. 90-93), and they will require innovations in packaging, labels and more.

In the field of *distribution*, innovations can be related to the sale of agricultural products through a WEB-site or by means of specialised equipment – such as milk vending machines, which began to be used in Bulgaria in 2011. The development of own WEB-site of the agricultural enterprise opens up possibilities for direct sales of agricultural production to end users. The creation of new own marketing channels, such as: own commercial and/or processing systems, travelling farm market at sector level and others. Discovering new markets and exploiting new forms of sales of agricultural production. Innovations in *marketing logistics* can be associated with the use of new forms of information management of transport and storage operations, new ways of transportation and storage of agricultural products and others. *These innovations can significantly reduce the costs to agricultural producers.*

In the field of *marketing communications*, agricultural producers can use widely the achievements of modern information systems and technologies. They can enhance their public relations (PR), the direct contacts with consumers and communities for more effective demonstrations and tastings of bio and other products. Innovations can be directed to mobile product advertising via smartphones of potential users or community. These can include building of own WEB-site of the agricultural enterprise, which can act as a communication channel and an integrated information system. Innovations can be used in stimulating sales and personal sales by agricultural enterprises or in the field of direct marketing – *solidary agriculture and others. Internet and cloud technologies provide great opportunities for innovations in this area that had not previously existed in agricultural enterprises.*

Innovations in *pricing* may be associated with building new information systems for prices with high degree of integration of inputs and outputs, allowing continuous monitoring of market prices and making adequate pricing decisions. This requires innovations for the use of new software, hardware, WEB-based platforms and others. On the basis of these innovations, agricultural enterprises can exploit new ways of dynamic price comparisons, new forms of price adjustments and others. Innovations in this area can radically change pricing models of agricultural enterprises – from accepting the price to having active role in its formation, by developing auctions and others. *Innovations in prices and pricing can significantly improve the liquidity and profitability of agricultural enterprises in Bulgaria.*

The outlined marketing innovations are very difficult for individual implementation by most of the micro, small and fragmented agricultural producers in Bulgaria. This indicates that their integration both in horizontal and vertical plan with appropriate departments, institutions and markets into a network for innovations is a successful approach, which needs to concentrate their future efforts.

## **Conclusion**

The generalised conclusions that can be drawn from the conducted a priori research of the marketing innovation strategies of agricultural producers in Bulgaria are as follows:

- Innovations are the foundation of evolutionary and revolutionary development of agriculture. The markets of GMOs and bio products worldwide will continue to

grow in the coming decades, and along with them – the innovations in these areas. The state and agricultural enterprises in Bulgaria must have strategic vision and preparedness for new challenges and perspectives of development for the Bulgarian agrarian sector in these directions.

- State policy, financing, legal and regulatory framework for innovations in agriculture are inconsistent and ineffective. Bulgaria is paying least attention to innovations in the agrarian sector, which is a long-term obstacle for its growth.
- The environment for developing and introducing innovations in our agrarian sector is unfavourable and not stimulating – poor infrastructure in rural, underdeveloped branch organisations and communities, low use of modern information and communication technologies. Existence of monopolised and imperfect national and regional agricultural markets and others.
- The majority of marketing innovations of agricultural products are imposed by the markets, industries, services and science development and established primarily at meso, macro and mega level, and very seldom at micro level – the agricultural enterprise.
- Agricultural enterprises in the country have little integration with scientific and research units, and respectively have weak research, development and innovation activities. The main emphasis is placed on the subsidised purchase primarily of partial product and process innovations, which determines their lower degree of novelty.
- Bulgarian agriculture is characterised by underdeveloped structures of joint marketing, clustering and integration with other sectors. Organisational innovations related to marketing such as subsidised organisations of producers and others, which are not the result of product and process innovations, are poorly represented. Marketing innovations and strategies of agricultural enterprises in Bulgaria are among the least used and applied in their practice.

The conclusions show the existence of significant barriers to entry and generation of innovations in agricultural enterprises in Bulgaria. However, they have to develop and implement innovative marketing strategies in order to survive and become more competitive. By means of innovations they can secure opportunities for direct access to agricultural markets, create products with high added value, differentiate, develop their brands and others. This requires cooperation and high degree of integration between agricultural producers and their suppliers, distributors, consumers, government and non-profit institutions in an innovation network.

Agricultural enterprises should be ready to meet the old and face the new challenges: global climate change and market preferences, changes in industries, which require increasing quantities of agricultural raw materials, demographic changes, changes in agricultural policies, etc., by appropriate innovation strategies. Innovations in agriculture will solve many of the above discussed challenges that will face humanity in the near and distant future.

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