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Bachev, Hrabrin

Institute of Agricultural Economics, Sofia

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A case of integration of organic dairy sheep farm in value chains in Bulgaria

Hrabrin Bachev¹

Executive summary

This paper presents the state of integration of small scale dairy farms in value chains in Bulgaria and a case study on organic farming as a new prospective approach for market inclusion. It outlines the evolution of dairy sheep farming and organic production; analyzes the pace, factors and impacts of development of a successful organic dairy sheep farm from North-West Bulgaria; specifies driving factors and prospects of small-scale organic farming development; assesses possibilities for replication of positive experience in other farms, and suggests recommendations for improvement of public policies and farming strategies.

Post-communist transition has been associated with a significant decline in number of sheep and milk output in the country. The majority of dairy sheep farms are not included in modern market chains because of the lack of public support, and impossibility to adapt to new market, industry and institutional requirements. Effective inclusion is usually initiated by a dairy processor specialized in processing locally produced milk. High quality, assets, capacity, product specificity, cite, time of delivery etc. dependency between farmers and processors is commonly governed by tight long-term and interlinked contracts. Processor sets up own quality and safety control system from on farm milk collection to wholesale delivery of processed dairy products, and integrates stages of raw milk collection, cooling, and transportation, and packaging and storage of processed products. Downward, the value chain often expands at regional, nationwide and even international scale.

Organic farming is a newly emerged and fast growing approach driven by the huge market opportunities, well established institutional framework, and available public support. There has been 11 folds increase in number of organic operators since 2003 but organic areas and livestock are still a tiny portion of the utilized agricultural areas and livestock.

Organic production and processing is associated with significant specific investments and a highly specific character of the output. Consequently, organic dairy value chain includes

¹ Correspondence should be addressed to Hrabrin Bachev, Institute of Agricultural Economics, 125 Tzarigradsko Shose Blvd., Blok 1, 1113, Sofia, Bulgaria, e-mail: hbachev@yahoo.com

effective governance carried out by a local (processor, exporter) and/or an international (entrepreneur, wholesale buyer) agent. Smaller number and remoteness of the organic livestock farms requires a higher operational scale to make integration feasible. There is on farm integration of feed and forage production, milk production, and milk collection and cooling stages. In downward side, a close (contract, interlinked, joint investment) coordination of marketing of processed dairy products develops at national and international scales. Value chain also includes a third-party control on all stages carried out by an independent certified body as well as a public co-funding of superior costs associated with organic farming.

The organic sheep farm “Agrobusiness 88” LTD in Skravena was established in 2006 as a partnership between Mr. Romanov and his son. The farm has evolved from a small family sheep holding with output primarily used for household consumption. Entrepreneurship of Mr. Romanov has been crucial for the development of this farming enterprise. Major reasons for launching the new farming enterprises are: past experiences with sheep raising; skills and know-how of family members; available resources; reached adulthood of the son; the vision and a long-term strategy for developing a modern organic sheep farm. There are also excellent conditions for organic sheep farming in the region (natural environment, abundant and cheap resources, experienced labor, local breeds of sheep), and a sense for a “potential” great demand for Bulgarian organic dairy products in local and international markets.

Chief reasons for registering the new farm as a firm are: possibility to define clearly (ownership, income-sharing, risk-taking etc.) rights between family members, opportunity to invest in a (good) reputation and “own brand” of business and products; and requirement of the buyer of organic milk.

Business relations with dairy processor „Kondov ecoproduction” LTD has a profound effect on development and market inclusion of “Agrobusiness 88” LTD. The former provided a secured long-term contract marketing of farm’s milk output which let a successful growth and immediate inclusion in the value chain. It also supplies an effective training of farm’s management and staff, know-how and up to date information on development of organic markets, access to specialized business links and professional organizations etc.

There has been a fundamental development of the farm since 2005. It has changed its type (from unregistered holding to a registered firm LTD); transferred ownership structure (from grandmother to grandson); modernized management and labor organization (from a collective family management and farming to inter-farm specialization of management and production functions); changed market orientation (from semi-market holding to a commercial enterprise with intensive relations with diverse market agents); and joined professional organizations (Association of Livestock Producers and Association of Organic Producers).

Furthermore, the farm has successfully transformed the character of production – from a conventional to an organic production (certified end 2008). A Dutch controlling body was arranged and financed by „Kondov ecoproduction” LTD. All elements of milk production and processing are subject of a regular control by the independent controller and the processor.

“Agrobusiness 88” LTD has expanded significantly managed resources and livestock, and modernized technologies. Family members have used bank credits and bought sheep, farmland, a tractor and equipment; leased meadows and pastures to produce feed for animals, and a barn to keep the flock; and hired shepherds and a veterinarian. The flock of sheep expanded 9 folds by the end of organic certification. In 2010 the farm started a new stage of modernization doubling the number of animals and creating a second flock, leasing a second barn and more lands, and hiring additional labor. Consequently, the amount of milk output and lambs augmented 3.4 times comparing to the beginning of transition period.

“Agrobusiness 88” LTD sells the entire milk output to a single buyer whose processing facilities are located 200 km away in Central Bulgaria. The entire output of produced organic cheese is exported to Holland and Austria. A milk supply contract between the farm and the processor is signed every year. During the conversion period milk was priced at national market level (due to established reputation of quality and safety) and after certification receives additional premium for organic milk (8% above the market price). The farm also receives a very good price for its lambs having a big demand from the region and beyond due to the excellent taste and organic character.

Since 2007 the farm gets a number of CAP subsidies (progressing levels of Area based payments and Payments for areas with handicaps, and changing amount of subsidy for sheep) which has helped expend resources, cover superior costs of production, and enlarge operations. It purchases no insurance for its crops, livestock, buildings, labor but for machineries.

Transition to organic methods has a positive impact on family farm. The size of operations augmented considerably, crop production mechanized, control on milk improved, and management enhanced by introduction of ICT. Milk productivity of sheep is lower (105-118 liters), the relative costs of organic production have risen more than 18% higher than the conventional farming while generated income progressed 15%.

The farm development and overall economic performance is estimated as good. According to expectations, the farm has successfully transformed into an innovative (organic) profit-making enterprise with a good reputation, high productivity, and full integration in a prospective market value chain. It provides stable employment and income for family members, pays back bank credits, meets contractual obligations to inputs and resource suppliers, and extends effectively operations.

Farm modernization has secured an effective trans-generation cooperation and a successful transfer of know-how and ownership of the farm. New farming enterprises invest in rural economy expanding commercialization of local production; employ and increase efficiency of otherwise abandoned natural resources; revive and extend traditional production; provide employment for local population; and enhance environmental conservation.

According to Romanovs, the most important factors for the farm development are: “own skills and entrepreneurship”, “family cooperation and solidarity”, “good organization”, “on farm integration of forage and livestock production”, and bilateral relations with „Kondov ecoproduction” LTD. In addition, crucial for the farm growth has been: family type of enterprise and employment, personal contacts of farmers, available family resources, international market demand for (Bulgarian) organic products, available credit in the country, and desire for involvement in environmental preservation activity. Future farm development will be mostly favored by the amount of family resources, size of farm operations, formal education in management and organic farming, potential profit from organic production, participation in NPARD measures, and improvement of public governance.

According to experts, the key factors for small-scale organic dairy farming development in Bulgaria are: farmers' entrepreneurial ability and desire for environmental conservation, public support to conversion to and carrying out organic and eco-farming, integration with processors and cooperation with the right food chain agent, demands of and access to international markets for organic products, improved and better enforced organic regulations and standards, “organic” education and information of farmers and public, and available local resources.

Conversion to organic farming would be an effective way for market integration of numerous small-scale and semi-subsistence sheep holdings in the country. Practically, there would be no “natural limits” for expansion of organic sheep farming. Besides, organic markets are at expansion stage both internationally and nationally. In this segment, there will be no big competition on the supply side while demands from organic processors are expected to grow. That would create strong incentives for “organic” investment by farmers, private and market agents. A great portion of population is currently employed in livestock sector while new organic venture could provide work for rural jobless.

However, in some remote regions the “labor factor” would be one of the key limitations for mass transition to organic dairy sheep (aged farmers, no successors taking over farm, no available workforce). Another limiting factor would be the superior capital requirements of organic farming. Thus, more favorable institutional environment for investments in eco-farming by farmers, food chain partners, and market agents is to be created to overcome

existing funding difficulties. Public assistance for cooperation of small holders in eco-actions is to be also given as an alternative mode for effective (“collective”) inclusion in value chain and a means to overcome labor and capital shortages, and efficiency problem.

In order to support and accelerate market inclusion of small scale sheep farms in organic dairy value chain public policy is to be directed to:

First, effective information and training of small producers and prospective entrepreneurs on formal regulations, practical possibilities, and likely benefits for transition to organic farming. A significant modernization of the National Agricultural Advisory Service is to be undertaken which is to reach all prospective (younger, innovative) small holders and stakeholders; include organic farming, eco-management, organizational design, and contract and food chain management issues; embrace modern methods of education and advice; customize services to specific needs of individual farms and stakeholders; involve leading and innovative farm managers in demonstrating and sharing experiences; cooperate closely with university and research systems, and private sector.

Second, improvement in management and design of public programs. Better information of potential beneficiaries, simplifying formal procedures, minimizing related costs, accelerating implementation of (all) environmental and rural development measures, and increasing transparencies and stakeholders participations in all stages of program management, have to take place. Any restrictions for market oriented small holders participation in various public support measures are to be abandoned such as: large farm size to get area and agro-ecological payments; ineligibility of landless livestock holdings for area based payments; lack of NPARD support for restoration of abandoned farmland and organic livestock production; lack of support to semi market holdings if production is dominated by a single product coupled with age and pension restrictions for applicants and inappropriate criteria for defining “semi-market farms”.

Some NPARD measures with low efficiency or demand (e.g. Semi-market farms, Organization of producers) are to be redesigned and funding directed to more popular and effective activities such as Modernization of farms, Young farmers; Payments to areas with handicaps etc. Besides, support is to be given to prospective ventures of small farmers such as: expansion of farm size; group farming; diversification into related activity; cooperation in local products, services, origins; joint ventures and partnerships including with non agrarian and foreign agents etc.

Third, giving public support to all forms of market inclusion (driven by a food chain actor or small holders cooperation). Criteria for participation in public support programs are to be redefined and access opened to diverse forms of cooperation (partnerships, joint ventures, long-term contracts, protected local products) between farmers, producers associations, and

businesses. Public incentives (credit, tax, risk sharing) for investments by food chain agents in integration of small-scale framers is to be provided; priority in leasing out public farmlands to small holders, their associations, and/or partnerships with food chain agents, given if they are involved in eco-farming; badly needed public/cooperative risk-sharing organization is to be introduced to insure all farms.

Four, public assistance to small-holders association and relations of small scale organic producers and interested food chain actors, including public-private partnerships with diverse organizations involved in such activity.

Five, education and information of consumers in content and benefits of organic farming boosting public image of (eco-)farmers as producers of essential public goods. Public information is to be carried both at international (where Bulgarian organic products are still unknown) and national scales (where market is just emerging and organic products are new for consumers). Public system for data collection and impact(s) assessment of eco-actions and their timely disclosure to public is to be set up. Diverse forms for promotion of organic production are to be employed such as public advertisements, organic fairs, open days, public-private joint ventures, public sponsorship of organic farms visits and other private initiatives etc.

Six, overcoming complexity, controversies, and “blank points” in formal regulations on organic and eco-farming. Property rights on diverse agro-ecosystem services are to be better defined and enforced (e.g. borders of “whole farm” for signing a public eco-contract, regulations on semi-organic farming, extension of rights beyond production and trade with organic products etc.). Huge regional and sectoral variations in implementation and enforcements of public order are to be also overcome.

Seven, improving overall institutional environment and public governance through perfection of property rights protection, and laws, contracts and standards enforcement; combating mismanagement and corruption in public sector; removing restrictions for market, private and collective initiatives etc.

Lastly, giving more public (national and international) support to multidisciplinary and interdisciplinary research on eco-agriculture and individual food-chains, their specific governance, and (natural, technological, socio-economical, market, institutional, behavioral, international etc.) factors and impacts.

1. Introduction

The issues of strategies, approaches, and policies of small scale farmers' integration in value chains are among the most topical around the globe (FAO). They are particularly important in East European countries which transition has been associated with emergence of numerous small holdings excluded from modern market chains (Csaki *et al.*). Nevertheless, with few exceptions (Bachev and Manolov; Bachev 2010b), there are no in depth studies on factors, forms and challenges of market inclusion of dairy farms in Bulgaria.

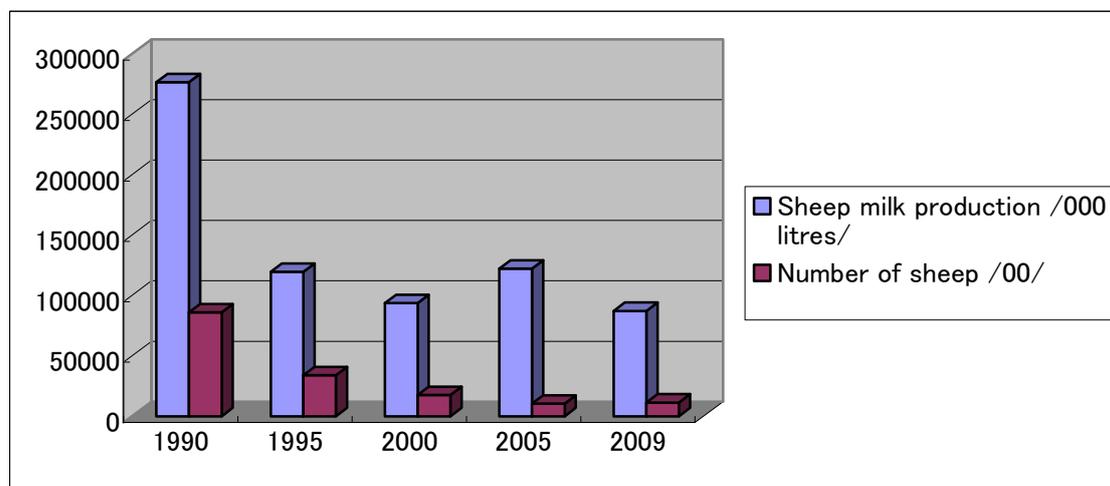
This paper presents the state of integration of small scale dairy sheep farms in value chains in Bulgaria and a case study on organic farming as a new prospective approach for market inclusion. First, it outlines the evolution of dairy sheep farming and organic production in the country. Second, it analyzes the pace, factors and impacts of development of a successful organic dairy sheep farm from North-West Bulgaria. Third, it specifies the driving factors and prospects of small-scale organic farming development. Finally, it assesses possibilities for replication of the positive experience in other farms, and suggests recommendations for improvement of public policies and farming strategies.

2. State of dairy sheep farmers integration in value chains

2.1. Evolution of dairy sheep farming

Dairy sheep farming has experienced a dramatic evolution during post-communist transition and EU integration (Bachev and Manolov; Bachev 2010a). The processes of privatization of resources, restructuring of farms, liberalization and adjustments of markets, and institutional modernizations (new EU and national regulations, industry standards etc.), all they have brought about a significant decline in number of sheep and milk output (Figure 1). Furthermore, a major part of sheep production has been carried out in a numerous small scale holdings with subsistence or semi-market character (Table 1).

Figure 1. Evolution of dairy sheep sector in Bulgaria



Source: National Statistical Institute

Table 1. Evolution of dairy sheep farms in Bulgaria

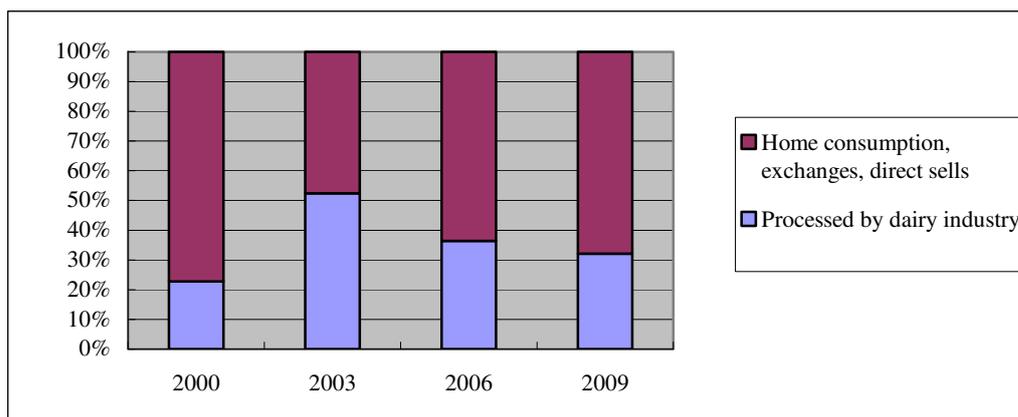
Number of sheep in farm	2003		2006		2009	
	% in total sheep	% in total farms	% in total sheep	% in total farms	% in total sheep	% in total farms
1 - 9	56.7	89.3	39.6	85.0	29.8	82.8
10 - 49	26*	9.6	27.9	12.5	22.6	13.2
50 - 99	7.8	0.7	13.1	1.6	14.4	2.2
100 and more	9.5	0.4	19.3	0.8	33.2	1.7
Total number (000)	1365.8	232.9	1386.5	170.7	1178.1	113.7
Sheep per farm	5.9		7.6		10.0	

Source: Ministry of Agriculture and Food

In the past several years there has been a considerable reduction in number and an increase in the average size of sheep holdings (Table 1). Nevertheless, only less than 9% of sheep farms are commercial or semi-market holdings. Most of the milk output is home consumed or distributed through informal channels (given to friends and relatives, exchanged, or sold to individuals) (Figure 2). As a result of the impossibility to adapt to new market and institutional requirements (new EU, national, processing industries, and consumers requirements for quality, quantity, safety, traceability, animal welfare, environment protection), the majority of dairy sheep farms and the bulk of the output are not included in modern market chain (Bachev and Manolov). The later has been further impeded by the lack of

effective forms for group production, marketing and processing in the sector due to the high costs and low sustainability of these organizations (Bachev 2010b). Consequently, sheep raising rests one of the least modernized, competitive, and unattractive for young people segment of agriculture.

Figure 2. Sheep milk according to type of utilization in Bulgaria



Source: Ministry of Agriculture and Food

There has been a fundamental modernization and consolidation of dairy processing industry as well. The later has been driven by strong market competition (at international and local markets) and newly introduced EU and national quality and safety standards².

Until EU accession, the public intervention in dairy sector was directed toward introduction and enforcement of modern quality and safety standards, veterinary and sanitary control, and (most recently) providing investment subsidies for modernization of processing industry. Throughout transition and EU integration the effective public support to livestock farming was non existent or very low (Bachev 2010b). Consequently, small-scale operations with primitive technology and hygiene, environmental and animal welfare standards, and low income and market opportunities, have been typical in the sector.

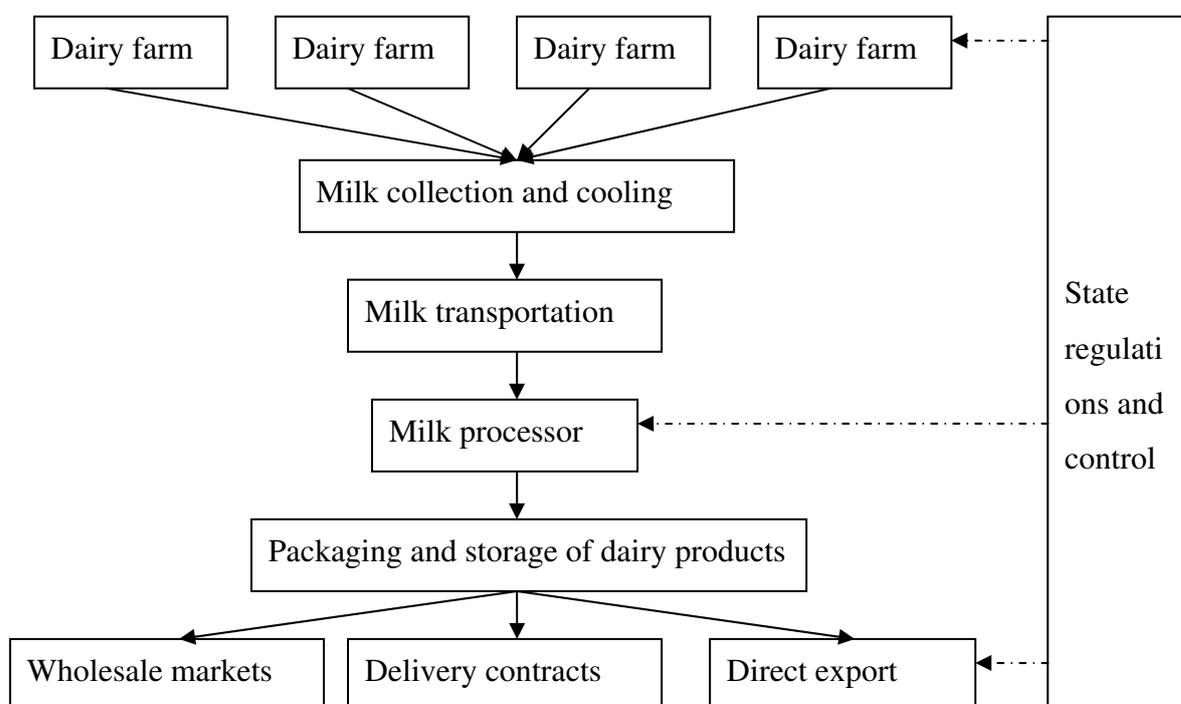
Since 2007 there are huge EU and national funds for “Area based payments” to farms, top-ups to livestock, and various measures for “Agrarian and rural development” (support to young farmers, modernization of farms, restructuring of semi-market holdings, recovering traditional productions, diverse environmental schemes etc.). Nevertheless, due to the lack of awareness and experiences, poor design and restrictive criteria, complicated and costly

² Consequently, the number of dairy processors declined significantly since 2000 - from 840 to 224 currently (MAF).

procedures, and enormous mismanagement, the progress in implementation of most agrarian and rural development measure has been very slow³. Up to date, the overall public support to small-scale and livestock farming rests insignificant⁴.

There have emerged good examples for effective inclusion of small-scale dairy farms in value chain (Bachev and Manolov). Market integration has been usually initiated by a dairy processor specialized in processing locally produced milk. Despite the number of alternative buyers of raw milk in major dairy regions, a close quasi and/or complete integration of different stages of value chain often develops (Figure 3).

Figure 3. Typical dairy value chain in Bulgaria



Backward, the high quality, assets, capacity, product specificity, cite, time of delivery etc. dependency between farmers and processors is commonly governed by tight long-term and interlinked contracts. For instance, interlinking the inputs, working capital, service etc. supply by the processor against the milk marketing by dairy farmers is widespread.

³ By end of 2009, only 7,5% of the funds for 2007-2013 National Plan for Agrarian and Rural Development (NPARD) were effectively utilized in 6 out of 22 approved measures (MAF).

⁴ For instance, merely 0,7% of all funded projects for “Modernization of agricultural holdings” (Measure 121) are for milk producers and just 0,2% for grazing livestock (MAF).

Furthermore, the processor sets up an own (private) quality and safety control system from on farm milk collection, through transportation and processing, to wholesale delivery of processed dairy products. Stages of collection and cooling of raw milk of small farmers, milk transportation from farms to the processing company, packaging and storage of processed products, all are typically integrated by the processor. The role of the state is to set up process, quality and safety standards, license dairy processors, and exercise control on final (consumers) products.

Downward, the value chain often expands at regional, nationwide and even international scale. For examples, delivery contracts specifying timing, quantity, products differentiation, packaging requirements etc. with specialized shops, large retailers, restaurants as well as brand name trade are broadly used.

All that development is associated with increased efficiency, commercialization, and income level of participating in value chain dairy farms (Bachev 2010a).

2.2. Development of organic farming

Transition to organic farming is a new prospective way for integration of small-scale dairy farms in modern market chains. Organic farming is a newly emerged and fast growing approach driven by the huge (international and local) market opportunities, well established institutional framework, and available public support.

Organic farming in Bulgaria appeared in 1990s as a venture of few enthusiasts from Agrarian University in Plodded⁵. A Project for Supporting the Development of Organic Agriculture in Bulgaria was initiated⁶ and the Foundation “Bioselena” established (1996) to assist its implementation. First organic farms were set up in the end of 1990s and officially certified in 2001. The Association of Organic Producers (2009) and the Association of Traders of Organic Products (2010) have been also established.

Trade with organic products is getting a wider distribution in recent years but the organic share in food market continues to be very low⁷. Up to date between 80-95% of the organic

⁵ Agro-ecological Center with a demonstrative farm was established (1987) and produced organic vegetables started to be sold at a small stand at Thursday Market, Plodded (1996).

⁶ Funded by the Swiss Agency for Development and Cooperation.

⁷ Currently there more than 2000 organic products sold in more than 2000 shops around the country(Apostolov). Market for organic products is estimated at 4 million Euro or around 1% of the food turnover in the country (Mitova).

output of the country is exported (Vitosha Research). Besides, there are reported cases of fake organic products on internal market and for export alike⁸.

Specific Regulations on organic crop, livestock and related productions were introduced in 2001 and later on modernized according to EU legislations on production, processing, control, trade, labeling, and import of organic products⁹. Bulgarian bodies for control on organic production started to be certified in 2003.

Public support to eco-activity (including conversion to organic farming) was launched with 2001-2006 SAPARD but actually benefited few producers (Bachev 2010b). Various environmental support measures such as “Payments to farmers in areas with handicaps” (Measure 211 and 212) and “Agri-environmental payments” (Measure 214, including “Organic crop and honey-bee production” and “Traditional animal breeding”), are currently available under 2007-2013 NPARD. While targets for Measures 211 and 212 are already reached, the progress in implementation of agri-environmental measures has been very slow¹⁰.

A National Plan for Development of Organic Agriculture in Bulgaria (2007-2013) was prepared in 2006. According to its goals by 2013 as much as 8% of the Utilized Agricultural Area (UAA) in the country will be cultivated by organic methods and 3% of sold products will have an organic nature.

There has been 11 folds increase in number of organic operators¹¹ since 2003 (Table 2). The organic producers comprise the largest part (74%) of organic operators, while organic processors are just 4% of them.

⁸ Despite the overall Government efforts to break down the production and trade with non-genuine food products (illegitimate or non-corresponding to labels dairy and meat, fake brands etc.), they are still common around the country.

⁹ Ordinance 22, Ordinance 35, Law for Implementation of EU Common Organization of Markets of Agricultural Products.

¹⁰ Up to date, merely 4,4% of the target for Measure 214 has been accomplished (MAF). Approved projects for “Organic agriculture” and “Traditional animal breeding” account for 19% and 15% of all projects under that measure.

¹¹ Organic operator is any natural or legal person who produces, prepares, imports, exports or deals with organic products (EUROSTAT).

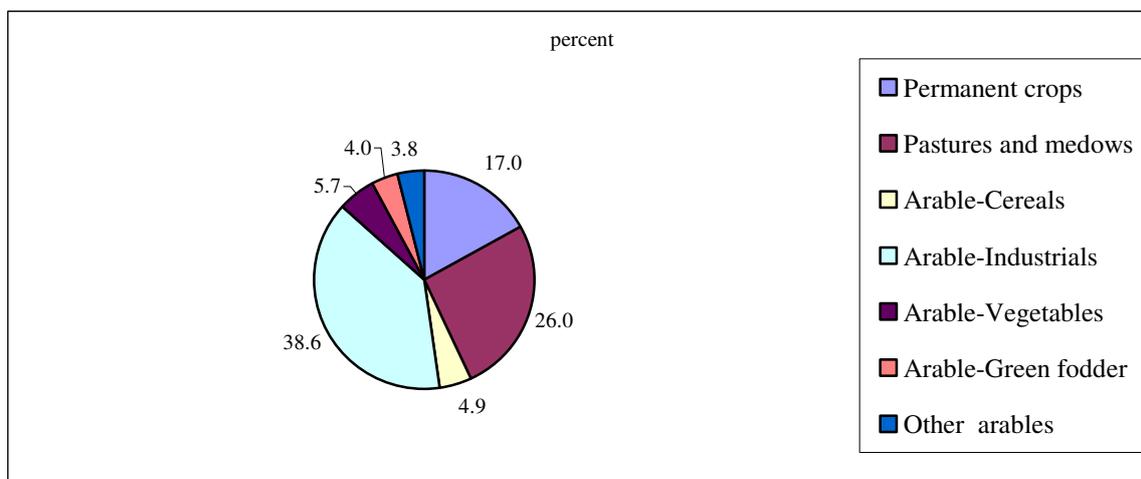
Table 2. Evolution of organic production in Bulgaria

	2003	2004	2005	2006	2007	2008	2009
Controlling bodies	2	2	2	2	6	10	10
Organic operators	29	51	111	181	240	254	316
Organic farming area (ha)	650	1113	2432	3061	11808	16663	na
% in UAA	0.01	0.02	0.05	0.06	0.23	0.33	
Wild herbs and fruits (ha)	-	-	-	110143	397 835	397 835	na
Organic cattle			395	na	395	470	na
% in all cattle			0.11		0.11	0.14	
Organic sheep			294	na	1690	2471	na
% in all sheep			0.02		0.14	0.21	
Organic goats			32	na	1058	na	na
% in all goats			0.01		0.12		
Organic bees colonies			23508	na	35747	na	na

Source: Ministry of Agriculture and Food, EUROSTAT

There has been enormous augmentation of organic areas and livestock in last several years. However, the organic areas and livestock are still a tiny portion of the UAA and livestock in the country. “Fully converted organic areas” accounts for 25.4% of total organic areas (EUROSTAT). “Pastures and meadows” and “Arable green fodder”, integral parts of the organic livestock farming, comprise a good segment of fully converted areas (Figure 4).

Figure 4. Share of different type of lands in fully converted areas in Bulgaria (2008)



Source: EUROSTAT

There are still few organic livestock farms in the country. What is more, there are only three organic processors for dairy products and a single organic processor of meat and meat products. Therefore, there is a condition of small number of local supplies and buyers for organic livestock products, and a strong symmetrical (capacity, assets, technology) dependencies in vertical chain of organic dairy.

What is more, most of the organic (dairy and other) products are exported to other countries since the local and national markets for organic products are very small (Apostolov). The later is a result of unawareness of local consumers, higher (unaffordable) prices, lack of confidence in truly organic character of available products etc.

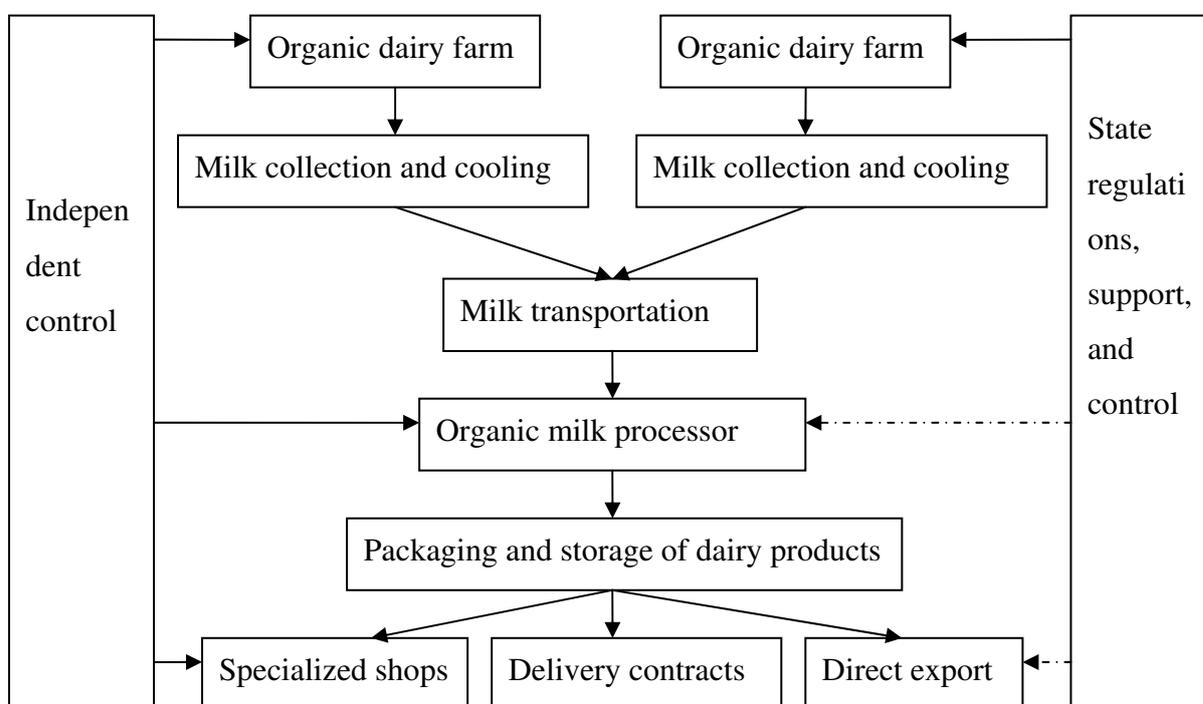
The organic production and processing is associated with significant specific investments (for conversion, certification, carrying out production and marketing) and a highly specific character of the output. All that requires a tighter coordination of individual stages in vertical chain in national and transnational scales¹². Consequently, the typical value chain of organic dairy includes effective governance carried out by a local (processor, exporter) and/or an international (entrepreneur, wholesale buyer) agent. In our case study, a foreign agent (an importer of Bulgarian organic products) arranges the independent certification of local organic production and finances the certification costs (unbearable by local small operators)¹³. In other case, a leading restaurant chain intends to integrate backward organic dairy farming and processing in order to secure the effective supply of needed local organic products (Bachev 2009).

Furthermore, a deeper contract or compete integration of individual stages of value chain develops – namely between the organic crop (production of feed for animals) and livestock farming, between the dairy farming and processing as well as between the milk-processing and marketing of final dairy products (Figure 5).

¹² Up to date, most of the organic agricultural production in the country has been governed by outside investors, and widely perceived as “big businesses” sub-sector. What is more, widespread eco-labels are often seeing as part of the marketing strategies of big companies rather than an indicator for genuine eco-actions (Bachev 2009).

¹³ Leading involvement of a foreign agent is also typical for the organic industrial crops, fruits and vegetables, bee-keeping etc. All these enterprises have been initiated by or developed in a strategic cooperation with a foreign counterpart, and have their output exported.

Figure 5. Value chain for organic dairy products in Bulgaria



Principally, a smaller number and remoteness of the organic livestock farms requires a higher (than traditional sheep grazing) operational scale to make integration feasible (to invest and pay-back costs for organic conversion and certification; explore economies of scale and scope on production, storage, transportation, transactions etc.). For instance, our non-inclusive survey on organic sheep holdings in the country has found out that the number of animals in farms varies between 60 and 800.

In the organic value chain there is on farm integration of the feed and forage production, milk production, and milk collection and cooling stages. In downward side, there is a close (contract, interlinked, joint investment) coordination of the marketing of processed dairy products at a national and international scale.

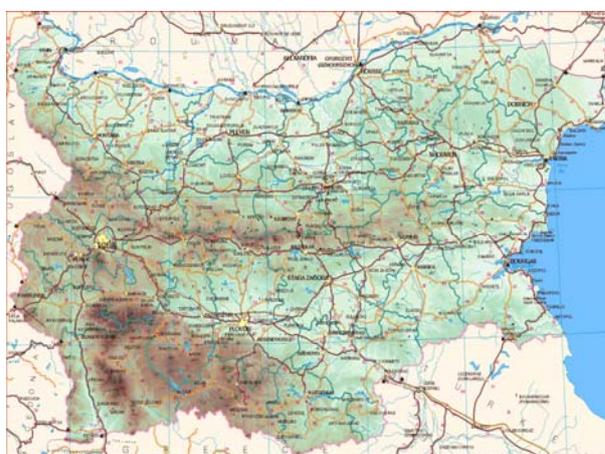
The value chain also includes a third-party control on all stages (farming, processing, trade) carried out by an independent certified body as well as a direct public involvement in funding of superior costs of conversion to and carrying out organic farming.

3. The case of “Agrobusiness 88” LTD, Skravena

3.1. Business environment in Botevgrad region

Botevgrad is situated in North-West part of Bulgaria, just 60 km North-East from Sofia (Map 1 and Map 2). Population of the municipality is less than 30000, predominately living in Botevgrad town. Income opportunities in the region are very limited¹⁴ and a great portion of the workforce finds employment in the capital city. Almost all households are involved in some farming activities for food self-supply and/or marketing.

Map 1. Bulgaria



Map 2. East-Central Bulgaria



Livestock is an important sector of local agriculture. There are 1278 holdings rearing sheep with the size just above country’s average. Most livestock farms have been experiencing hard time adapting to market and institutional environment. The majority of dairy farmers have been unable to break-even because of the low milk price, lack of public support, absence or inefficiency of collective organizations, and preference of dairy processors to large suppliers. Consequently, most sheep farms sustain their subsistence (semi-market) character, stay away of the modern market chains, or have gone out of business while the number of sheep declined 18% since 2003.

Skravena is a small village located around 8 km North-West from Botevgrad town. Agriculture is a major activity of local population as most of the residents work in other sectors in nearby Botevgrad or Sofia.

¹⁴ North-West region is one of the least developed regions of Bulgaria.

3.2. Evolution of organic sheep farm “Agrobusiness 88” LTD

The organic sheep farm “Agrobusiness 88” LTD in Skravena was established in 2006. It has evolved from a small family sheep holding with output primarily used for household consumption.

The entrepreneurship of Mr.Rumen Romanov has been crucial for the development of this farming enterprise. After the death of his father, Mr.Romanov retired as a police officer, and took the management of his mother’s farm. Among other activities, the family farm had previous experience with raising up to 30 sheep mostly to meet household meat and milk needs. In 2005 Mr.Romanov decided to set up a new organic sheep farm with his son Dimitar Romanov just reaching adulthood. In 2006 they registered an agri-firm “Agrobusiness 88” LTD with the President and owner Mr. Dimitar Romanov and the Executive Director Mr.Rumen Romanov (Table 3). Meanwhile Ms.Maria Romanova, the daughter of Rumen Romanov, took over the management of old family farm.

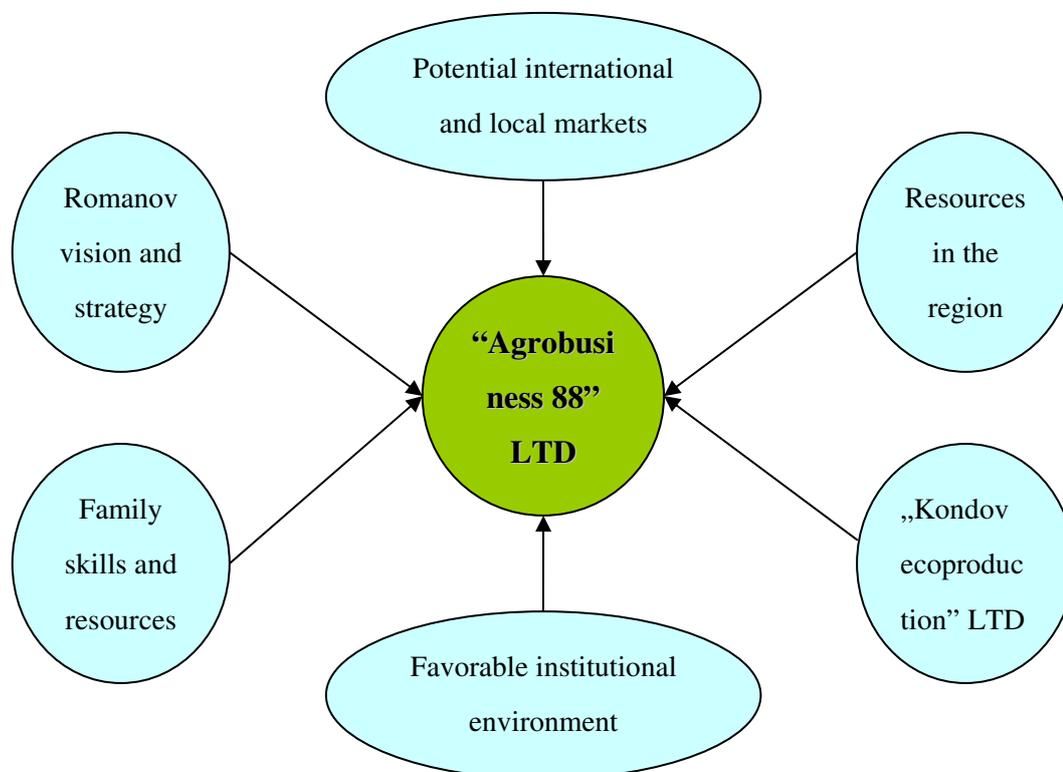
Table 3. Major characteristics of “Agrobusiness 88” LTD’s founders

	Mr.Rumen Romanov	Mr.Dimitar Romanov
Position in the firm	Executive Director	President and owner
Year of birth	1958	1988
Education	Professional high school	Professional high school
Formal agrarian education	No	No
Professional experience (years)	31	4
in agriculture (years)	7	4

Source: interviews with the President and the Manager

According to Mr.Rumen Romanov, major reasons for launching the new farming enterprises are: past experiences with sheep raising; skills and know-how of family members; available resources; reached adulthood of his son (and necessity to find a perspective employment); and the vision and a long-term strategy for developing a modern organic sheep farm (Figure 6).

Figure 6. Major factors for “Agrobusiness 88” LTD’s development



Furthermore, there are excellent conditions for development of an organic sheep farm in the region such as clean natural environment, abundant and cheap resources (meadows and pastures, barns, labor), experienced labor, local breeds of sheep etc.

Besides, there is no another organic sheep farm in the entire region while there is a sense for a “potential” great demand for Bulgarian organic milk and dairy products in local and international markets.

Finally, there is well-established and favorable institutional environment for development of organic farming in the country (regulatory framework, well-defined and enforced property rights, public support schemes, information campaigns etc.) facilitating this new private venture.

Chief reasons for registering the new farm as a firm are: possibility to define clearly (ownership, income-sharing, risk-taking etc.) rights between individual family members¹⁵, and

¹⁵ between Mr.Romanov and his mother, between the son and the daughter (and her new family).

opportunity to invest in a (good) reputation and “own brand” of business and products. Another major factor for the firm mode was the requirement of the buyer of organic milk („Kondov ecoproduction” LTD, Sofia).

When “Agrobusiness 88” LTD farm was established there were only 5 organic livestock farms in the country and just one organic sheep holding with less than 300 sheep. That is why, it was “easy” for the farmer to find a buyer of organic milk (small number condition in supply and demand sides). In fact, as Mr. Rumen Romanov said “the buyer found us”, and there have been a number of buyers interested in getting the farm produce. Furthermore, unlike unfair competition with “informal” producers on standard milk markets, there has been no competition with genuine organic milk in the country (small number of suppliers, high safeguards, strict control).

Business relations with „Kondov ecoproduction” LTD (the state of a bilateral trade) has a profound effect on development and market inclusion of “Agrobusiness 88” LTD. There has been a situation of “missing” or undeveloped markets for organic farm products in the country such as wholesale, retail or on farm trade existing for traditional farm produce. „Kondov ecoproduction” LTD has provided a secured long-term contract marketing of farm’s milk output which has led to an effective growth and immediate inclusion in the (trans-national) value chain.

In addition, „Kondov ecoproduction” LTD has arranged the implementation and funding of the farm’s independent organic certification. It has been also providing an effective training of farm’s management and staff (e.g. veterinarian), know-how and up to date information on development of organic markets, access to specialized business links and professional organizations etc.

There has been a fundamental development of farm since 2005 (Figure 7). The farm has changed its type from unregistered holding to a registered firm (LTD). The ownership structure has been also transferred – from the grandmother to the grandson. Furthermore, there has been modernization of the management and labor organization - from a collective family management and farming in the past, to inter-farm specialization of management and production functions alike (President, Executive Director, veterinarian, shepherds).

Figure 7. Timeline of development of “Agrobusiness 88” LTD

Farm characteristics	Year					
	Until 2005	2006	2007	2008	2009	2010
<i>Type of farm</i>	Unregistered holding	Registered LTD				
<i>Ownership</i>	Maria Romanova	Dimitar Romanov				
<i>Management and labor organization</i>	Collective family	Inter-farm specialization of management and production functions				
<i>Membership organizations</i>	None	Association of Livestock Producers			Association of Organic Producers	
<i>Market orientation</i>	Subsistence (semi-market)	Commercial enterprise				
<i>Type of production</i>	Traditional	Conversion to organic farming		Certified organic farm		
<i>Size of operation</i>	Small scale, unchangeable	Small scale, growing operations			Medium size, stable	
<i>Type of funding</i>	Own finance	Bank credits, outside funding certification		Bank credits		
<i>Managed resources</i>	Entirely family owned	Leased farmland, barns machinery		Ownership on key assets, leased farmland and barns		
<i>Type of technology</i>	Primitive	Partial mechanization				Full modernization
<i>Farm reputation</i>	None	Growing		Well established		
<i>Type of pricing</i>	None, local market	National market		Price premium		
<i>State of integration</i>	None	Long-term contract sell of milk				
<i>Market insurance</i>	None	None	Tractor and equipment			
<i>Outside control</i>	None	Independent control, milk processor and state control				
<i>Public support</i>	None		Subsidies on farmland and livestock			
<i>Type of income</i>	Non-monetary, supplementary	Major income source, employing non-family labor			Profit making enterprise	

Source: interviews with the President and the Manager

The farm has fundamentally changed its market orientation - from semi-subsistence (market) holding with few local transactions to a commercial enterprise with intensive relations with diverse market agents (creditors, resource owners, labor, inputs suppliers, insurers, buyers of output etc.). Besides, it has been involved in collective (professional) organizations becoming a key member of the Association of Livestock Producers and the Association of Organic Producers

Furthermore, the farm has successfully transformed the character of production – from a conventional to an organic production. It has passed through formally required conversion period and meets strict rules for organic crop and livestock productions – for land cultivation and crop protection practices; origin of livestock; feeding of animals; prevention from and medication of diseases; livestock buildings and environment, technologies, transportation and identification of livestock products; appropriate records keeping etc. “Agrobusiness 88” LTD was formally certified as an organic farm in the end of 2008.

A Dutch controlling body has been arranged and financed by „Kondov ecoproduction” LTD and its foreign counterpart buying produced organic cheese. Subsequently, all elements of farm production and milk processing are a subject of a regular control by the independent controller. In addition, the Dairy processor exercises a strict control on farm’s milk quality and safety. .

In order to realize its strategy, “Agrobusiness 88” LTD has expanded significantly managed resources and livestock, and modernized technologies (Table 3). Most parts of feed and forage production has been mechanized, and office work enhanced by ICT (computer, internet connection etc.).

Table 3. Evolution of production resources and output of “Agrobusiness 88” LTD

Indicators	Until 2005	2006	2007	2008	2009	2010
Employed family members	2	2	2	2	2	2
Number of hired labor	0	3	5	5	5	7
Owned farmland (ha)	3	3	3	5	5	5
Leased land (ha)	0	60	60	60	120	120
Number of tractors	0	0	1	1	1	1
Leased barns	0	1	1	1	1	2
Number of sheep	up to 30	140	250	260	300	480
Milk output (liters)	3540	15400	27500	28600	33000	52800
Number of lambs	45	220	390	410	470	750

Source: interviews with the President and the Manager

The sheep are from local sustainable breeds such as Mestna, Chirpanska and Staroplaninka. Milking of sheep is done by hand twice daily. The collected milk is stored in a cooling tank owned by the farm.

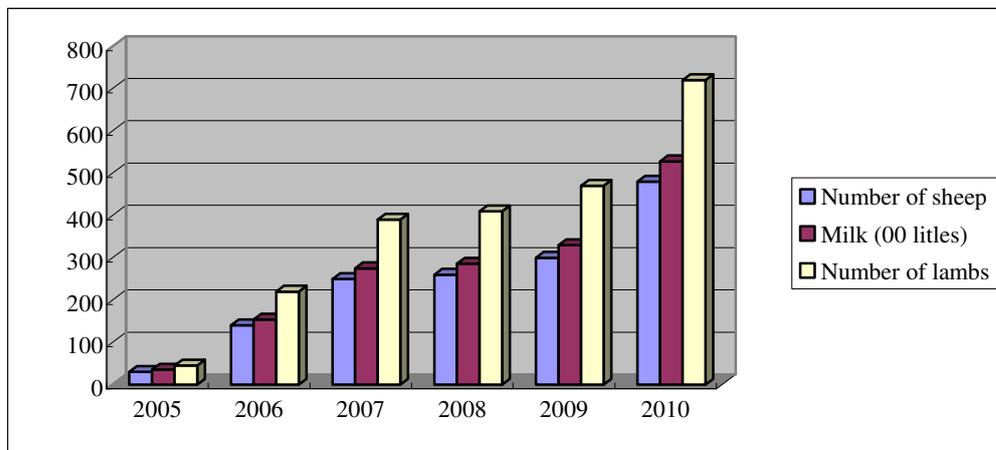
Family members have used bank credits (against the collateral of personal property) and bought sheep, a tractor and other equipment (straw-press, fandrom, computer). From local individuals “Agrobusiness 88” LTD has leased meadows and pastures (1 and 5 years contracts) to produce feed for animals, and a barn (15 years contract) to keep the flock. Furthermore, the farm hires 6 shepherds (animal care-takers) and has a permanent service contract with a veterinarian taking care after livestock health and safety. Nevertheless, a high turnover of animal care-takers (duration of employment less than a year) is reported as a problem¹⁶.

Romanovs have invested a lot of time studding requirements of organic agriculture and adapting them to the conditions of own farm. Rumen Romanov’s entrepreneurship and previous (managerial and farming) experience and Dimitar Romanov’s innovative efforts, have been important factors for the overall development of new farming enterprise.

As a result of the modernization, the flock of sheep expanded almost 9 folds by the end of organic certification (Figure 8). In 2010 the farm started a new stage of modernization doubling the number of animals and creating a second flock, leasing a second barn and more lands, and hiring additional labor. Consequently, the amount of milk output and lambs augmented 3.4 times comparing to the beginning of transition period. Due to restrictions associated with the organic production the milk productivity of sheep is lower (105-118 liters) while the costs of production 18% higher.

¹⁶ Mostly representatives of gypsy minority are involved in these unattractive operations.

Figure 8. Dynamics of “Agrobusiness 88” LTD’s production



Source: interviews with the Manager

Despite the demand from other buyers, since 2006 “Agrobusiness 88” LTD sells the entire milk output to a single buyer – the organic dairy processor „Kondov ecoproduction” LTD. The processing facilities of the latter are located in Staro Selo village, near Sopot town in Central Bulgaria – that is around 200 km South-East from Skravena (Map 2).

The Dairy purchases farm’s milk daily and transports it to processing facilities by own specialized tracks. „Kondov ecoproduction” LTD has got around 14-18 milk suppliers located in North-West and North Central regions with sheep number ranging from 100 to 800. The entire output of produced organic cheese is exported directly to Holland and Austria.

A milk supply contract between the farm and the processor is signed every year (in the beginning the renewal period was 3 months). Milk is purchased at current “market price” as a premium for organic milk is added up since 2008. The formal documentation of transaction and the payment is done regularly every 10 days. According to Mr. Romanov the Dairy gives “a good price and fulfils completely the contractual obligations”.

During the conversion period “Agrobusiness 88” LTD’s milk is priced at national (rather than lower local) market price level due to the established reputation of quality and safety. After organic certification, the farm receives an additional premium for organic milk amounting to 8% above the market price. The farm also receives a very good price for its lambs having a big demand from the region and beyond due to the excellent taste and organic character. Farm’s lambs are predominately purchased by friends and middlemen as all requirements for organic productions (slaughtering of animals, transportation etc.) are strictly enforced.

Before the EU accession, the farm did not get any public support. Since 2007 it receives a number of public (CAP) subsidies such as: progressing levels of Area based payments (120

Euro per ha in 2009) and Payments for areas with handicaps (40 Euro per ha in 2009), and changing amount of subsidy for sheep (15 Euro per head in 2009). In fact, that considerable CAP support has helped “Agrobusiness 88” LTD expend rapidly resources, cover superior costs of production, its enlarge operation. The farm has not touched any (eligible) subsidies from the NPARD Environmental measures¹⁷ since these measures were open for application late in 2008. Neither is gets any support from other public programs or uses public services such as Advisory Service, Market Information etc.

“Agrobusiness 88” LTD purchases no insurance for its crops, livestock, buildings, labor but (the mandatory one) for machineries. Like the majority of Bulgarian farms, it either applies traditional methods for risk assurance (security guards and dogs, keeping remote land plots, cash reserves) or takes the entire risks and associated costs of failure (Bachev and Nanseki).

According to Romanovs, the transition to organic methods has a positive impact of family farm (Table 4). The size of operations augmented considerably, the crop production mechanized, control on milk improved, and management enhanced by introduction of ICT. The relative costs of organic (crop and livestock) production have risen more than 18% higher than the conventional farming while generated income progressed 15%.

Table 4. Impacts of “Agrobusiness 88” LTD’s modernization

Impact on:	Positive	Neutral	Negative
Production costs			+++
Milk yield			+++
Lamb yield		+	
Profitability			-
Farm size	+++		
Family income	+++		
Crop mechanization	+		
Livestock mechanization		+	
ICT applications	+		
Family employment	+++		
Economic sustainability of farm	+++		
Intergenerational transfer of farm	+++		

¹⁷ E.g. for Conversion to organic farming (100 Euro per ha for meadows and pastures), and for Traditional sheep raising (25 Euro per head).

Market inclusion	+++		
Innovation	++		
Rural community and economy	++		
Livestock development in the region	+		
Organic dairy in the country	+		
Natural environment	+++		

Source: interviews with the President and the Manager

The farm development and overall economic performance is estimated as good. According to expectations, the farm has successfully transformed from a supplementary to a single stable employment and income source of family members. Now the farm is an innovative (organic) profit-making enterprise with a good reputation, high productivity, and full integration in a prospective market value chain¹⁸. It generates enough income for family members, to pay back bank credits, meet its contractual obligations to inputs and resource suppliers, and extend effectively its operations.

The farm modernization has also secured an effective trans-generation cooperation (grand-mother, father, son) and a successful transfer of know-how and ownership of the farm (from father to son). It provides a prospective and fulfilling employment for the young Dimitar Romanov who otherwise would have left that remote rural community and agriculture.

Furthermore, this new farming enterprise invests in and revitalizes the rural economy expanding commercialization of local production; employs otherwise abandoned natural resources (meadows and pastures, barns) increasing efficiency of use; revives and extends traditional production (sheep grazing, sustainable breeds and technologies); provides employment for local population (hiring 6 shepherds and a veterinarian on a full-time base); and enhances environmental conservation. Successful expansion of “Agrobusiness 88” LTD’s contributes to the progression of organic dairy in the country, while its experience (innovative approach, pace of development, good achievements) is a positive model for other farms and entrepreneurs from the region and beyond.

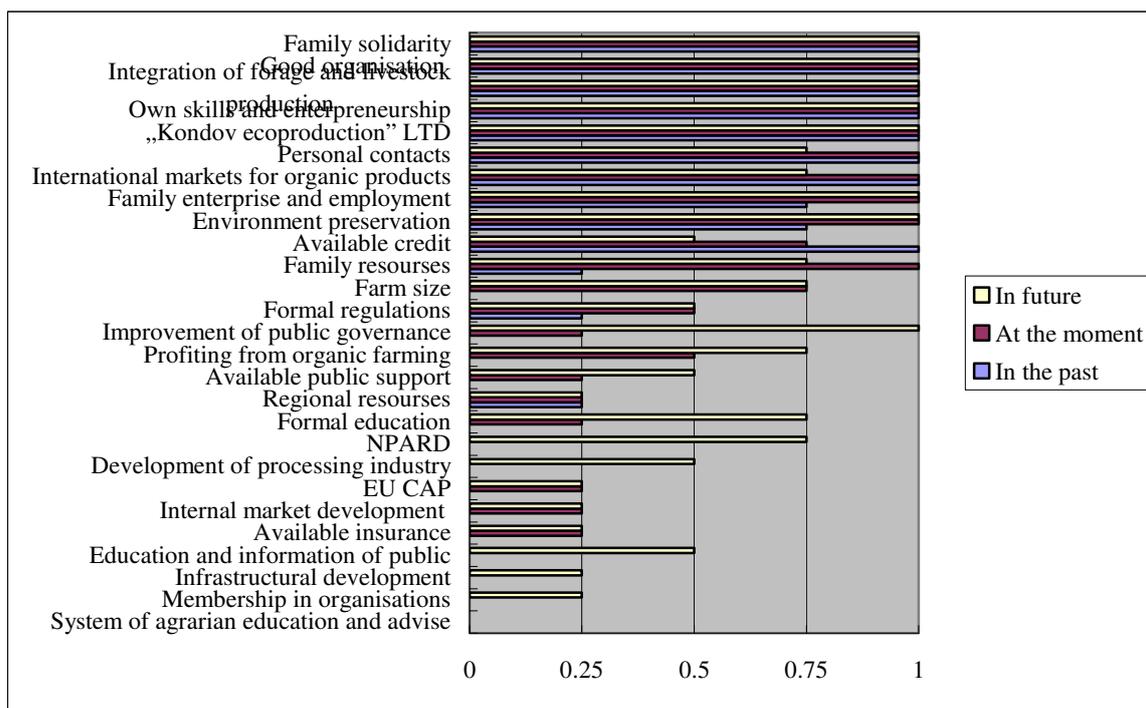
¹⁸ In addition to Agrobusiness 88” LTD, there is only one organic sheep farm in the entire North-West region of the country.

3.3. Driving factors and prospects of small-scale organic farming development

We have tried to identify the driving (personality, family, economic, institutional, environmental etc.) factors for the Romanov’s farm development.

According to Romanovs, the most important factors for their farm development are: “own skills and entrepreneurship”, “family cooperation and solidarity”, “good organization”, “on farm integration of forage and livestock production”, and bilateral (good) relations with „Kondov ecoproduction” LTD (Figure 9). In addition, crucial for the farm successful growth has been: family type of enterprise and employment, personal contacts of farmers, available family resources, international market demand for (Bulgarian) organic products, available credit in the country, and desire for involvement in environmental preservation activity.

Figure 9. Importance of different factors for “Agrobusiness 88” LTD’s development*



* 1 – very important, 0.75 – important, 0.5 moderate, 0.25 low importance, 0 - unimportant

Source: interviews with the President and the Manager

Future farm development will be mostly favored by the amount of family resources, size of farm operations, formal education in management and organic farming, potential profit from organic production, participation in NPARD measures, and improvement of public governance.

On the other hand, available regional resources, public support, development of processing industry, internal (organic) market development, system of agrarian education and advise, (organic) education and information of public, available insurance, EU CAP implementation, and membership in professional organizations, all they are evaluated as unessential for “Agrobusiness 88” LTD’s development.

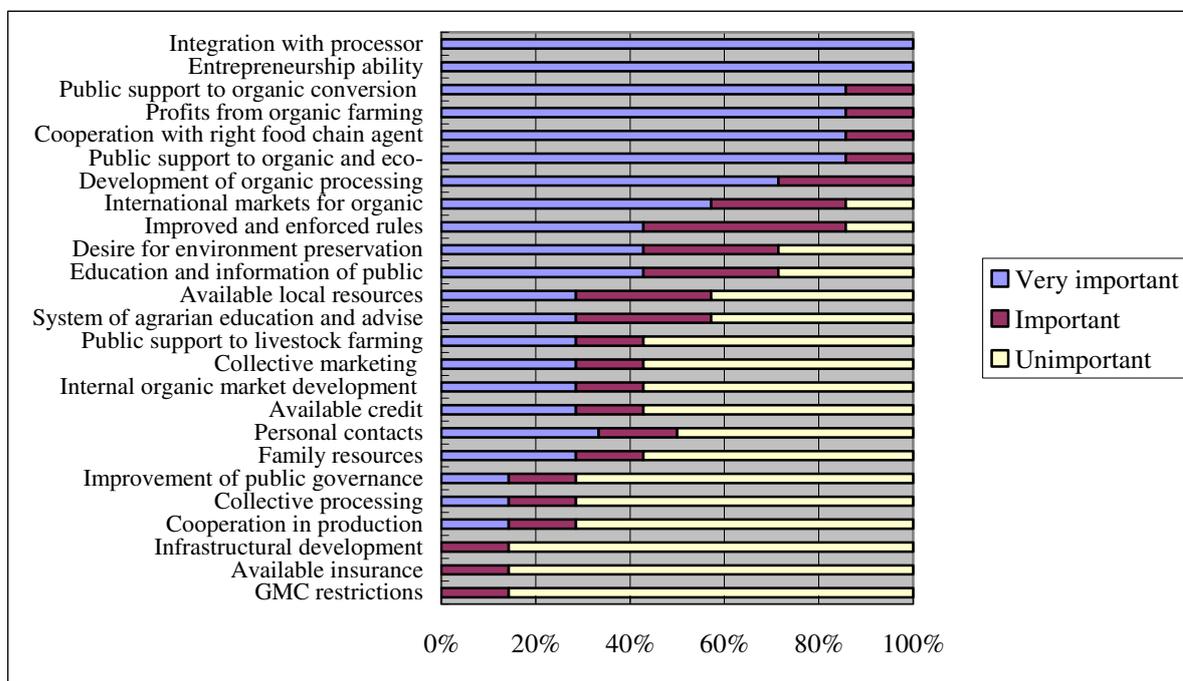
In 2010, a new stage of “Agrobusiness 88” LTD modernization has started. Additional labor has been hired, more farmland leased in, and a second flock of sheep created. Furthermore, Romanovs have bought a piece of land and are planning to build a modern barn for sheep. The goal is in next 2 years to improve significantly living environment for animals, mechanization of operations, and working conditions for hired labor.

Moreover, applications for various public support measures under NPARD are being prepared or planed such as: investment in farm modernization, support to young farmers, and environmental actions (organic farming and traditional livestock grazing). What is more, further (a university level) education of Dimitar Romanov in management and organic farming is planed and perceived as an important factor for his and the farm development.

In order to identify major factors for possible replication of the case study model, we have carried out an expert assessment on factors for small organic dairy farm development. The President and the Manager of “Agrobusiness 88” LTD, another organic dairy farmer from Sevlievo region (North-Central Bulgaria), the processor of “Agrobusiness 88” LTD milk, two leading experts in organic farming (from the Agrarian University and the Agricultural Academy), and an expert from the Ministry of Agriculture and Food, all they have been included in the expert panel.

According to most experts, the key factors for small-scale organic dairy farming development in Bulgaria are: farmers entrepreneurial ability and desire for environmental conservation, public support to conversion to and carrying out organic and eco-farming, integration with processors and cooperation with the right food chain agent (co-investor, processor, trader, exporter), demands of and access to international markets for organic products, improved and better enforced organic regulations and standards, “organic” education and information of farmers and public, and available local resources (Figure 10).

Figure 10. Importance of different factors for small-scale organic dairy farming development in Bulgaria



Source: experts assessments

At the same time, GMC restrictions, availability of insurance, infrastructural development, cooperation of organic producers, collective processing of organic products, and improved public governance, are not seen as important for the small organic dairy farming development.

4. Conclusions and recommendations

Transition to organic farming and modernization of “Agrobusiness 88” LTD is a good example for an efficient integration of a small-scale dairy farm in modern value chain. Its success has been a result of the long-term vision, an effective strategy implementation, and a good family experience and inter-generation cooperation of Romanovs. Furthermore, rapid development of the farming enterprise has been enormously favored by the close cooperation with organic processor „Kondov ecoproduction” LTD; available production resources, commercial credit, and public support; and expanding markets for Bulgarian organic dairy products.

Conversion to organic farming would be an effective way for market integration of numerous small-scale semi-subsistence sheep holdings in the country. Up to date,

commercialization of these farms has been impeded by their shorter-horizon (aged farmers, unattractiveness for younger operators), small size and investment capability, and low productivity, competitiveness, and compliance with modern quality, safety, environmental etc. standards.

Practically, there would be no “natural limits” for expansion of organic sheep farming in the country. Meadows and pastures accounts for more than 34% of agricultural lands, and there is an enormous possibility to extend the organic livestock operations within formal restrictions of maximum of 13.3 sheep per ha.

What is more, organic markets are at expansion stage both internationally and nationally. Bulgarian dairy products are popular in many high income countries for the comparative advantages (good quality, low costs, originality), and their “organic” counterparts would be well received. Moreover, internal organic food market will continue to develop as consumers income and awareness increase, (state and independent) control on organic products become more reliable, and public confidence on products quality straighten. Thus, organic production as a new approach would attract innovative farmers (entrepreneurs) while growing organic markets would increase income opportunities in declining sectors such as sheep grazing. In this segment, there will be no big competition on supply side (keeping milk prices stable) while demands from organic processors are expected to grow. Therefore, conversion to organic farming guaranties an “automatic” inclusion in dairy value chain. Besides, there are no formal restrictions for expansion of dairy sheep similar to the EU quota system for cow milk. All that would create strong incentives for “organic” investment by farmers, private and market agents (banks, co-investors, vertical food chain partners).

Furthermore, a great portion of population has got experience in sheep raising and it is currently full- or part-time employed in livestock sector. In addition, there is huge unemployment in rural areas who could find jobs in the new organic venture. However, (unlike in the case study region) in some remote regions it may be difficult to find younger generation entrepreneurs wanted to commit to (a labor intensive, full time engaging) livestock farming. Besides, it might be a serious problem to hire specialists (veterinarian etc.) and permanent animal caretakers (shepherds) which are necessary to extend organic operations (like in Romanovs case). Transition to organic farming is a long-term venture requiring a greater commitment, capital, and period for conversion, extension of farm size, and pay-back on investments. It would be undertaken either by younger generation farm managers or as (Romanovs case) a joint inter-generation venture. The “labor factor” would be one of the key limitations for mass transition to organic dairy sheep in many sheep farms (aged farmers, no successors taking over farm) and some regions (no workforce). Nevertheless, the later may change according to the progression of profit from organic operations in the sub-sector.

Another limiting factor for the replication of Romanovs model would be superior capital requirements of organic farming (for farm's transition to organic operations, expansion and modernization). Most small holders have no internal financial sources or access to outside credits (high lending costs, lack of or unwillingness to use personal property as collateral). Thus, more favorable institutional environment for investments in eco-farming by farmers, food chain partners, and market agents is to be created to overcome existing funding difficulties. The latter requires appropriate modernization of public policies, structure of property rights, and support measures related to agro-ecosystem services.

Public incentives and assistance for cooperation of small holders in eco-actions is to be also given as a means to overcome labor and capital shortages, and efficiency problem. Informal collective organizations in sheep raising have been widely practiced in rural areas as a way to concentrate or supplement individuals resources, expand division of labor, and make part-time farming possible. In certain instances and regions (insufficient family/hired labor and/or resources), group organization of organic sheep production and marketing would be an alternative to Romanovs case mode for effective ("collective") inclusion of small farmers in value chain. It would make possible or more efficient individual or collective organic operations allowing smallholders to concentrate and/or complement labor, farmland and other resources (e.g. collective certification, common cooling tanks); expand operational size; explore benefits of labor division and (functional and/or production) specialization, and scale economies; share costs and risk of conversion; increase transacting (contractual, access to public programs etc.) efficiency etc.

Public policy could assist and accelerate significantly the development of organic dairy chain and smallholders integration in organic market. It is to be directed to support the effective adaptation of smallholders to organic value chains and formal market requirements as well as to increase consumers information and confidence in organic products. More particularly policies modernization is to focus on following:

First, an effective information and training of small producers and prospective entrepreneurs on formal regulations, practical possibilities, and likely benefits for transition to organic farming. Training is to embrace all food chain actors and stakeholders associated with small farms integration – processors, traders, agrarian bureaucrats, community leaders, local administrators, members of farming associations, NGOs etc. Besides necessary skills and knowledge in integral eco- and organic farming management, a special emphasis is to be put on training in (general and environmental) entrepreneurship, organizational design, financing, contract and food-chain management. Furthermore, positive (and negative) experiences of innovating organic farmers in the country and abroad are to be widely popularized.

In this respect, a significant modernization in organization and programs of the National Agricultural Advisory Service is to be undertaken. The later is to reach all prospective (younger, innovative) small holders and stakeholders; include organic farming, eco-management, organizational design, and contract and food chain management issues; embrace modern methods of education and advice; customize services to specific needs of individual farms and stakeholders; involve leading and innovative farm managers in demonstrating and sharing experiences; cooperate closely with university and research systems, and private sector. The system of high and university (agrarian and economic) education is to include in curriculum the important organizational design, food chain and contract management issues in addition to Organic farming and Farm management.

Second, organic agriculture is a long-term venture associated with significant costs for transition to and carrying out organic operations. Funding of such long-term highly specific (to an organic dairy value chain) investment can hardly be provided by small farmers or financed by commercial credit (future premium for organic products is not acceptable as a collateral). Thus, conversion to organic farming (other eco-actions) has to be effectively supported by the public. In that respect, a significant improvement in management and design of public programs (including adapting CAP instruments to the specific “Bulgarian” conditions) is to be undertaken. Up to date, most public support measures are not accessible by small scale farmers due to the lack of information, bad design, restrictive criteria, widespread mismanagement and corruption etc. Better information of potential beneficiaries, simplifying formal procedures, minimizing related (direct and transaction) costs, accelerating implementation of (all) environmental and rural development measures, and increasing transparencies and stakeholders participations in all stages of program management, have to take place.

What is more, any restrictions for market oriented small holders participation in various public support measures are to be abandoned. Presently, quite a large farm size is required to get a direct and agro-ecological payments (1 ha and 0,5 ha accordingly); landless livestock holdings are not-eligible for area based payments; NPARD does not provide support for restoration of abandoned farmland and organic livestock (but forage) production etc. Similarly, support to market orientation of semi-market holdings is not available if production is dominated by a single product (what is often the case); there are (up to 60) age restrictions for applicants while working life (and retirement age) augments considerably; applicants must have no pension coverage; enormous (as in old EU states) criteria for defining “semi-market farms” applies (1-4 ESU) etc.

Some measures of NPARD with low efficiency or demand (e.g. Semi-market farms, Organization of producers) are to be redesigned and/or funding directed to more popular and effective activities such as Modernization of farms, Young farmers; Payments to areas with

handicaps etc. Besides, support is to be given to prospective (common, non-standards, informal) ventures of small farmers such as: expansion of farm size; group farming; diversification into related activity (on farm marketing, processing, eco-system services); cooperation (in registration, production, processing, marketing) in local products, services, origins; joint ventures and partnerships (including with non agrarian and foreign agents) etc. In many instances, small-scale farming has got “informal” organic or semi-organic character applying traditional methods, little or no use of chemicals etc. Public support would maintain or expand that huge sector assisting its effective adaptation to formal requirements for (semi)organic production.

Third, outside food chain agents (investors, processors, traders, retailers) will continue to play an essential role in transition to organic farming and value chain integration of small farmers. Their importance is to be recognized and public support given to all private (food chain driven) forms of market inclusion. In addition, cooperation of small-holders is to be encouraged and assisted in order to facilitate the market integration. Consequently, criteria for participation in public support programs are to be redefined and access opened to diverse forms of cooperation (partnerships, joint ventures, long-term contracts, protected local products etc.) between farmers, producers associations, and businesses.

Furthermore, public incentives (credit, tax, risk sharing etc. preferences) for investments by food chain agents in integration of small-scale framers is to be provided (e.g. in conversion to organic farming, joint eco-venture etc.). Likewise, priority in leasing out public (state, municipality) farmlands to small holders, their associations, and/or their partnerships with food chain agents, is to be given if they are involved in environment conservation (e.g. organic livestock) farming. Besides, badly needed public/cooperative risk-sharing organization is to be introduced providing accessible insurance against natural disasters and market disturbances for (all) farms.

Four, effective forms of permanent public assistance to small-holders association, and relations between (active, potential) small organic producers and interested food chain actors is to be established - e.g. public registration, information, match-making, organizing fairs and other forums etc. Public-private partnerships with diverse initiatives of other organizations involved in such activity (Bioselena, Association of Organic Producers, Association of Traders of Organic Products, different cooperatives and private enterprises etc.) are to be broadly applied. There is increasing number of participants in organic production and food chain (thus, increasing scarcity of information and transaction costs) which impede or slow down integration of numerous small farmers. Public intervention would facilitate contacts between farmers (cooperation in production, marketing, processing), and farmers and vertical partners,

and accelerate adaptation to mutual needs decreasing costs and intensifying market integration.

Five, there is to be a permanent education and information of consumers in content and benefits of organic farming, and enhanced efforts to boost public image of (eco-) farmers as producers of essential public goods. Public information is to be carried both at international (where Bulgarian organic products are still unknown) and national scales (where market is just emerging and organic products are new for consumers). In this respect, a public system for data collection and impact(s) assessment of eco-actions (including organic farming), and their timely disclosure to public is to be set up¹⁹. Diverse forms for promotion of organic production are to be also employed such as: public advertisements, organic fairs, open days, public-private joint ventures, public sponsorship of organic farms visits and other private initiatives etc.

Importance of internal market is usually underestimated by organic investors and experts. In fact, one of the restricting factors for internal market demand is higher prices of organic compare to regular products (50-100%). Nevertheless, internal consumers prices will gradually decrease and become more affordable along with the expansion of local organic production and trade (improved efficiency, explored economies of scale/scope on production and transaction activities). That would boost further the expansion of internal and international organic markets alike.

Six, widely criticized complexity, controversies, and “blank points” in formal regulations on organic and eco-farming have to be overcome. What is more, property rights on diverse agro-ecosystem services (including organic production) are to be better defined and enforced. For instance, public eco-contracts are currently available for the “whole farm” but it is not clear what the later includes (farm operations are usually dispersed in many locations). Besides, formal regulations on promising and easier accessible semi-organic farming do not exist at all.

Furthermore, if rights on organic production are extended beyond production and trade with organic products that would give more opportunity for an effective safeguard of invested capital, and its (partial or complete) intra or inter-generational transfer, trade (sell out or lease out an organic farm; contract out farming operations), or otherwise use (as a share in a joint venture or organic cooperative; a collateral against bank credit). Similarly, public eco-contracts or future organic price premium could be effectively used as a guarantee against market (e.g. bank credit) or equity (coo) funding of organic investments. Besides,

¹⁹ Currently, even for experts is it very difficult to find reliable data on number and scale of organic operators, organic market development and impacts etc.

public and private interests could be protected through obligations for preservation of organic operations by new owner (heirs, buyers, shareholders), lesser, and emerged entity.

Not least important, huge regional and sectoral variations in implementation and enforcements of public order (property and contractual rights; public support measures; labor, eco, safety etc. standards) is to be overcome.

Seven, there is to be an improvement of overall institutional environment and public governance perfecting property rights protection, and laws, contracts and standards enforcement; combating mismanagement and corruption in public sector; removing restrictions for market, private and collective initiatives etc. All that would encourage long-term investment in prospective venture (like organic and eco production); facilitate organizational modernization (decreasing costs of initiation; property rights identification, trade, inter-generation transfer, disputing); increase public confidence in rules of law, independent certification, and authenticity of products; reconcile conflicts between different regions, sectors, and interest groups (e.g. continuing conflicts associated with NATURA and other protected zones); and eventually boost production, trade and consumption of eco (organic) products in the country.

Lastly, more public (national and international) support is to be given to understanding eco-agriculture and various food-chains, their specific governance, and (natural, technological, socio-economical, market, institutional, behavioral, international etc.) factors and impacts. In East Europe, there are few sectoral and functional studies while efforts of Agronomists, Ecologists, Technologists, Economists, Layers, Sociologists, and Behavioral Scientists are rarely united. Consequently, understanding on factors, efficiency, complementarities, and prospects of diverse modes of environmental and food chain management is impeded, and proper assistance to farming and agri-business strategies, organizational modernization, collective actions, and public interventions could not be given.

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