

ROLE OF AGRICULTURE IN SPEEDING UP ECONOMIC GROWTH

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Careful consideration was given to principal directions of the government assistance in accelerating agrobusiness development in Georgia; attention was focused not only on large but also on medium and small enterprises. One of the ways to solve the problem is to promote cooperatives of different forms and purposes by amalgamation of family farms. Together with structural, organizational and financial support, it is necessary to produce modern agricultural agents locally and launch assembling for small-size machinery and tools.

Global practice evaluation has shown that the key condition of poverty reduction is general employment and growth of labor productivity of the employees. The government of Georgia acknowledges that it can't be a passive observer of social and economic processes and it is trying to pin down principles which contribute to the increase in employment and bring out growth in incomes of the population. Correspondingly, it is essential to agree a united approach to poverty reduction and economic development. A solution of the problem depends on fulfillment of a number of social and economic measures. According to estimates of international organizations, the country ranks No 130 in economic environment. Therefore, there is brought up not only a question of speeding up integration into economically developed world system but also preparation for this integration is acute. This is exceptionally difficult and important practical task. We have to grade into the European principle of conducting economy.

In case of commitment to the European system of running economy, we will see that large enterprises of the country are substantively involved in international specialization of labor and fulfill a function of large market entities of regional significance. Their importance is essential for economic development of the country, but due to their technological limitedness and the place taken in the world market, they fail to fully solve the problems of employment and speedup of economic growth. This objective reality is understandable for Europe, and the economic policy in poverty reduction and growth of employment level is focused not only on large but exceptionally on medium and small enterprises [1].

It is noteworthy that there are 23 million medium and small enterprises throughout the EU, i.e. 99% of all the enterprises disposed on the territory of the European Union. More than 100 million people work in the mentioned enterprises (75% of the employed). The European Charter says that "Small enterprises must be considered as a main driver for innovation, employment as well as social and local integration in Europe." It should be pointed out that in 2001 51% of GDP and 75% of new jobs were created in these types of enterprises in the USA [2].

In the Republic of Armenia agriculture is the main economic sector, which is less profitable and attractive for investment performance, but economic growth depends on its development. If the government is interested to have stable and strong economy, then it should be supported by the creation of favorable investment, as the promotion of investment in agriculture is one of the main ways of economic development. Investment in agriculture have its peculiarities related to the fact that they are due to climatic conditions, which makes investment resources usage even more risky, endangering their efficiency, because nature has its own unique rules which control either impossible or requires huge financial resources. In recent years, the agricultural sector's most pressing task is to create a favorable investment environment and thus improve the investment activity of economic entities. Therefore, from this perspective, the main direction of the state's investment policy is the involvement and effective usage of financial resources in various agricultural fields [3].

We shouldn't also forget the existing experience. As far back as 20th century Georgia, the example of small

business real innovation in Georgian winemaking was when Kipiani prepared new wine out of three different kinds of grapes (Saperavi – 4%, Mujuretuli – 34%, Aleqsandrouli – 58%). Today this wine is known as Khvantekara. Tbilisi “Committee of Caucasus handicrafters” developed a cooperative system of manufacturing worsted socks of Tusheti with diverse forms of sales. This cooperation represented a form of so-called family cooperation.

In Georgia there are a lot of land-poor farms. Today one of the ways to solve the problem is to run cooperatives by joining (amalgamating) family farms.

It's true that the government turned its attention to cooperative system in 1993 by the Head of State decree N 270 “The Republic of Consumer Cooperation” dated as of December 27, 1993. In May 15, 1997 the law of Georgia “Consumer Cooperation About” was enacted. This meant that the government recognized the system but the law proved to be rather general and it does not meet up-to-date requirements. Thus it is necessary to establish a different law about cooperation in agriculture.

Today in Georgia, creation of cooperatives of different forms and purposes must be turned into the guarantee of enhancement of family farms and agriculture as a whole. As things now stand, cooperation should restore and create anew an organizational system of preparation.

A cooperative form is relatively more developed in Nordic countries, Switzerland, Denmark, the Netherlands, the USA, Poland, France, Israel and New Zealand. Israeli experience is of particular importance as it is mentally close and there are more possibilities to adopt the best practices. In this country are enacted the laws which set a time limit and regulate performance of cooperatives [4]. Over the last years the role of cooperatives has substantially increased in the USA. On an area basis, cooperative associations are fallen into local, regional and national associations. Cooperatives extensively affect dairy products industry of the country. With farmers, private companies and organizations, through the system of communicative relations, these cooperatives are involved in vertical and integrated structures of milk production. Over the last years, their enlargement and expansion of the area of their activities have been coming along. Sales of products are carried out by the first and second levels of cooperatives. The first levels of cooperatives purchase products directly from farmers and they can exercise primary processing of the products. The second level cooperatives can coordinate sales of products of the first level cooperatives; they can further process the products of the first level cooperatives and deliver finished products to customers [5].

Quick rate of introducing new information technologies changes methods of conducting business. Cooperatives which can make quick decisions and adapt to ever-changing environments will survive and will continue their

development at even a quicker rate. Otherwise, they either will be merged with other cooperatives or they become bankrupt.

Proceeding from the abovementioned, successful activity of agricultural cooperatives depends on their ability to rearrange swiftly and change their strategies in accordance with changes in external conditions of global economy. These changes are: reduction of money flow for cooperatives development; globalization of trade; cancellation of state control over domestic markets; production industrialization of agricultural produce and vertical integration; technological innovations; biological innovations; environmental restrictions.

Strategic program of agricultural cooperatives and, in particular, of consumer cooperation is evolved quite well by Georgian Agricultural Academy. This program considers what kind of enterprises, according to the regions, can be formed through cooperation with local communities. The program says that there are huge opportunities of producing meat and meat products, milk and dairy products in under study regions, particularly in Dusheti, Tianeti and Kazbegi municipalities, where live stock breeding, especially sheep breeding, has traditionally existed for ages. The population of high-mountain villages fails to sell final products, particularly in winter, and as a result these products are processed and stored primitively, unprofessionally that causes their contamination. In high-mountain settlements through cooperation with local communities, it is necessary to set up small enterprises for processing meat and dairy products [6].

Today *Camelina sativa* holds a key position in world production of oil plants. The reason for this is heavy yield (2.5 tons per hectare), high content of drying oil (36-40%) and proteins (25-30%). It is used for food (dietetic food), in medicine and perfumery, and as an additive to aviation and other types of fuel. Particularly topical is combined application of *Camelina sativa* to utilize lands of non-agricultural purpose under the conditions of land-poor Georgia. After expressing the oil, by-products (wastes) are used to obtain a composition of compound feed and fuel briquettes. This, in its turn, contributes to minimization of deforestation in mountainous regions where people usually cut over to get fuel. Such an approach is used in the world practice. In laboratory setting, using prototype equipment, through pyrolytic technique, from the biomass of *Camelina sativa* there was derived up to 70% of liquid mass on conversion to original biomass. In this case at high temperature without oxygen the biomass is diluted to obtain food dietetic oil and other substances. Solid wastes are used for compound feed in live stock and poultry breeding. Residues, in mixture with brown coal and other components, are used to obtain fuel briquettes. So with the use of innovation technologies and pyrolysis, it is possible

to get different beneficial products from agrestal oil plants (*Camelina sativa*) [7].

Processing of products and renewal of sales stipulate, in its turn, the development of live stock and sheep breeding, and herd expansion. New life should be breathed into silk weaving and folk craft, like felt and felt cloak making, into handiwork which are in heavy demand on the international market.

The most important line of development of the agricultural sector is to arrange favorable conditions for setting up farmer and state cooperatives and associations.

One of the supportive conditions is to elaborate, prepare and use local agricultural means. In the world assortment of pesticides nearly 700 active agents are used relatively often. On their basis thousands and thousands of different preparations are made ready, in some cases with combination of several existing agents.

New local compositions of furnished preparations contain approved, for a long time tested and effective agents in the form of formulization adjusted to local conditions. In this case, with the use of local raw materials in the composition, it is possible to take into account peculiarities of one or another country. It is notable that along with efficiency preservation and improvement, such compositions are significantly cheap (up to 20%) and fitted to the demands of the local market. Preparations are tested during no less than three years in the field environment for protecting grapes, peaches and other cultures and the results are rather positive [8-9].

The production process of the components of the most commonly used insecticidal preparations – pyrethroids - is fragmented. Only 2-3 companies produce chrysanthemum acid, and the base – diphenyl derivatives – is produced by other companies and then the components are condensed by putting up preparations (agents). Thus efficient agents of imported insecticides used in Georgia are formulated in different countries by different companies and then under different names they appear on Georgian market. It is possible to use plant residue - terebentene (turpentine) in an insecticidal preparation. It will increase the efficiency of insecticides and help fix them better onto the plants. At the same time, there exists a simplified method of obtaining pheromones of viticide (vine pest) – grape worm, and it is possible to produce this preparation in an amount necessary for Georgia. It is significant that at one time the extensive use of grape worm pheromone suppressed the population of this pest to economically accepted level. However, it is necessary to elaborate these measures and increase efficiency. On all occasions, our working group can prepare pheromones of main agricultural pests of the country.

In the formulation of the insectoacaricide preparation “Antipest”, a natural compound - turpentine oil - extracted from the pine pitch is used as an auxiliary component of the

basic active ingredient - synthetical pyrethroid. As a result of this, the composition of the new formulation has acquired not only insect-repellent quality but also its insectoacaricide activity has increased. Consequently, duration of exposure on the pest enhanced from 15-18 to 22-25 days. Due to the increase of the product action, life history duration of the pest is brought to stop and low concentration of the active substance is enough for its extermination. Effectiveness of “Antipest” which is a preparation of little environmental load with low content of pyrethroids is the same as of expensive imported insectoacaricides [10].

Fungicide preparation “Antifungal” is made ready on the basis of metal hydrophosphate and dihydrophosphate. In consequence of toughening ecological requirements to food products, heavy metal was elaborated with the purpose of substituting preparations containing cuprum. Soluble in water mixture of hydrophosphates and dihydrophosphates is obtained in interaction of orthophosphoric acid with zinc oxide. Toxicity, local irritant action and cumulative property are not characteristic for hydro- and dihydrophosphates. Long-term exposure of the preparation to the skin and mucosa do not give local and general allergic responses. The preparation does not have mutagenic activity, does not cause metal corrosion. According to the results of the field tests, fungicidal activity of practically environmentally safe phosphatic product is of the same efficiency as the efficiency of medium level toxic Bordeaux mixture. Proceeding from the above-mentioned, it is very important to replace preparations containing cuprum by “Antifungal”; it is important in the context of both environmental and health protection; it is also important for expansion of local wine export capacity [11].

The preparation “Proinsect” – against hibernating pests – presents concentrated oil-water sludge (inverted / water-in-oil emulsion) with high content of oil phase (up to 80%). Paraffinic oil is used as oil phase. Paraffinic oil gets stable suspension with water; this is stipulated by the fact that the system contains two hydrophilic and organophilic surface-active agents. In the milk like working liquid, obtained by dissolving the preparation in the water (in the ratio 1:50), high oil content determines long-term firm fixation of the preparation onto the plant even in the rain.

Humic preparation “Si-humat” containing silicium is made ready on the basis of humins obtained after processing local turf (Poti, Maltakva) or brown coal (Akhaltzikhe) with potassium hydroxide. Humic compound enriched by active silicium is obtained under the conditions of mechanochemical interaction between humins and highly-dispersive diatomite. After adding necessary for plants microelements (Fe, B, Mn, Cu, Co, Zn, Mo) into this humic compound, we get highly-efficient nourishing preparation. According to the results of the field tests, it increases steadiness of leaves and fresh shoots and disease

resistance of plants. Silicium content in this preparation causes significant raise of plant resistance against biotic stresses (pests, fungoid and virus diseases); it also causes the raise of plant resistance against abiotic stresses (drought, high and low temperatures). Plants are supplied with “Si-humat” in the form of working liquid of 100-fold dissolution by leafy feeding. During the process of spraying, absorption of the solution moved to the bottom (ground) is happening by the root system of the plant [12]. To enhance effectiveness of modern agricultural enterprises it is also necessary to launch modern machinery and tools assembly facilities for cultivating land-poor areas. Therefore, for economic upswing in Georgia it is necessary to pay attention to start-up and development of agricultural cooperatives which will help improve living conditions and raise the living standards of rural population. At the same time launching agricultural cooperatives will contribute to the economic upturn of the country and the development of infrastructure of market economy, to massive general employment. And all these are key factors for economical stabilization and increase of budget revenue. For this purpose it is preferable to elaborate state target-oriented programs, state supportive actions which help rural population to create cooperatives and give them a start in life. It is also essential to prepare legal framework.

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РОЛЬ АГРАРНОГО ХОЗЯЙСТВА В ДЕЛЕ УСКОРЕНИЯ РОСТА ЭКОНОМИКИ

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Рассмотрены основные направления государственной поддержки по ускорению развития агробизнеса в Грузии. Особое внимание должно быть уделено развитию не только крупных, но и средних и мелких предприятий. Признано, что одним из путей разрешения проблемы является формирование различных кооперативов с разными назначениями путем объединения семейных хозяйств. Наряду со структурно-организационной и финансовой поддержкой, необходимо наладить местное производство современных аграрных препаратов, а также организовывать предприятия по сборке малогабаритных машин и орудий.