Analysis of the current state of agriculture

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Abstract. This article discusses the issues of the current state and trends in the development of agriculture in the Republic of Tajikistan. A comprehensive assessment of the current state and trends in the development of agriculture in the Republic of Tajikistan is given. It is noted that agriculture is one of the main branches of material production in the Republic of Tajikistan. With the transition to a market housewifely in the republic, the reorganization of collective farms and state farms took place and new organizational and legal forms of management were formed on their basis. According to the conclusions of the authors, the development of the housewifely complex of Tajikistan in the context of the transition to sustainable development, caused by the process of formation of market relations, is inextricably linked with the transformation of property relations and types of housewifely. At the present stage of development of property relations and modern forms of management, the transformation process is ensured through various legislative documents adopted by the state. It has been established that, regardless of the agrarian policy, the organization of any form of management is effective when establishing the appropriate mechanisms for their functioning.

1 Introduction

The development of the housewifely complex of Tajikistan in the context of the transition to "Industrialization", caused by the process of formation of market relations, is inextricably linked with the transformation of property relations and types of farming, as the in agriculture. The process of development of diverse forms of ownership and management as a special achievement of mankind today more than ever requires new and highly effective scientific research.

As you know, there are different opinions on this matter, and therefore modern scientific generalizations are all the more necessary. There are a lot of such generalizations about our republic in the West and in the CIS countries.

The importance of the problem lies in the fact that at the present stage of development of the republic and its regions, it is necessary to show which forms of ownership and forms of management are most suitable for rural specifics and have the ability to solve issues of food self-sufficiency, employment of the rural population, and poverty solving. Today, these questions are the most important, to which agricultural science must find the right
answer for the needs of practice and a social breakthrough in the development of the republic.

At the present stage of development of property relations and modern forms of management, the transformation process is ensured through various legislative documents adopted by the state. In view of the foregoing, the role of the state in the process of transformation must have a conceptual certainty. In the absence of a theoretical justification for the transformation process, the solution of a number of sectoral tasks related to transformations in the economic system of the state, not only in our republic, but also in all other former union countries, of course, is very complicated.

The question of the transformation of agriculture is one of the most complex in the agrarian system. It should be noted that this decision was very relevant even earlier, in the pre-perestroika period. Many aspects of this issue have not been resolved, and therefore the transition to market relations turned out to be very difficult, since there was no clearly developed theory about the transformation of the planned housewifely system into a market one, respectively, into a multi-structural one, with mixed forms of ownership and management. If this transition were deeply and scientifically substantiated, then agriculture would not be in such a crisis as it is now. It should be noted that it is the transformation process in the context of the transition to market relations that is an indicator of the development of agriculture.

According to some scientists, an increase in production efficiency occurs when a change in the form of ownership is accompanied by a radical transformation of the management system, more precisely, it serves as a regulatory base for it [1].

The agrarian reform, dictated by the transition of sovereign Tajikistan to market relations, was vigorously discussed by scientists as early as the beginning of 1992. Then, along with the Government program, alternative programs were proposed, providing for a radical restructuring of agrarian relations through the denationalization of land resources and the reorganization of large agricultural enterprises into dekhkan (farmer) farms.

2 Materials and methods

The study used the method of theoretical knowledge: analysis and synthesis, logical, sociological and statistical analyses, expert assessments, observations and other methods in the context of substantiating the formation and development of agriculture.

Compiled legal acts of the Republic of Tajikistan, decrees of the Government of the Republic of Tajikistan, statistical data of the Agency on Statistics under the President of the Republic of Tajikistan, as well as data from the Agency for Melioration and Irrigation under the Government of the Republic of Tajikistan, The Ministry of Agriculture of the Republic of Tajikistan, the State Institution «Tajik NIIGiM», the Institute of Water Problems, data from the Asian Development Bank, annual reports of farms and regions, farming reference material, etc.

3 Results

Based on the need to gradually transfer agriculture to the rails of market relations, the Government of the Republic in March 1992 adopted the Program for Agrarian Reforms, which provides for the preservation of the foundations of collective farm and state farm production, the disaggregation of agricultural enterprises, the development of lease relations in them and the creation of farms. The program included the following directions for the development of property relations in the agricultural sector:
- Granting complete freedom to agricultural enterprises, turning them into commercial and entrepreneurial ones;
- Contracting;
- Leasing to labor collectives, individuals;
- Corporatization;
- Introduction of new forms of management;
- Privatization of individual elements of the production assets of agricultural enterprises.

However, due to the political crisis and the beginning of the armed conflict in the republic in 1992-1993, the reform, including the agrarian reform, was suspended. Moreover, during the armed confrontation, huge material damage was inflicted on the enterprises of the agricultural sector: a significant part of agricultural equipment was destroyed or stolen, and what was left was privatized; public animal husbandry in many farms was practically eliminated. As a result, in 1992-1994, there was a sharp decline in the gross agricultural output of the republic: in 1994 this figure was 57.2% of the 1991 level. The latter is explained by the fact that many of the most important tasks of the agrarian sector turned out to be intractable in the context of ongoing changes in the socially solvent and political course of the Tajik state.

In our opinion, the ongoing agrarian reforms, the ongoing agrarian reform were not well substantiated from a scientific and practical point of view. Something similar happened in other states of the Commonwealth. Agrarian scientist Miloserdov V V believes that the reforms taking place in agriculture have not justified themselves. In his opinion, there are very few positive results of the reform, and they cannot be compared with the collapse of the country's agricultural sector and the catastrophic impoverishment of the rural population [2]. The actual course of reform needs to be corrected, substantiated and regulated by the state.

Table 1. Agricultural production per capita (1991-2020) [2].

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Grain (kg)</td>
<td>120</td>
<td>54.3</td>
<td>91.6</td>
<td>77.8</td>
<td>133.8</td>
<td>167.5</td>
<td>167.5</td>
<td>172.5</td>
<td>3.2 times</td>
</tr>
<tr>
<td>Potato (kg)</td>
<td>45</td>
<td>32.3</td>
<td>18.2</td>
<td>50.1</td>
<td>80.2</td>
<td>100.9</td>
<td>100.9</td>
<td>138.2</td>
<td>4.3 times</td>
</tr>
<tr>
<td>Eggs (pcs.)</td>
<td>225</td>
<td>81.1</td>
<td>1.0</td>
<td>6.3</td>
<td>14.3</td>
<td>30.8</td>
<td>30.8</td>
<td>42.6</td>
<td>0.5 times</td>
</tr>
<tr>
<td>Milk and dairy products (l)</td>
<td>276</td>
<td>104.9</td>
<td>29.8</td>
<td>49.8</td>
<td>77.2</td>
<td>87.8</td>
<td>87.8</td>
<td>102.6</td>
<td>0.9 times</td>
</tr>
<tr>
<td>Meat (kg)</td>
<td>69</td>
<td>13.4</td>
<td>7.8</td>
<td>4.7</td>
<td>7.8</td>
<td>9.5</td>
<td>9.5</td>
<td>10.7</td>
<td>0.4 times</td>
</tr>
<tr>
<td>Fruits and berries (kg)</td>
<td>80</td>
<td>53.2</td>
<td>42.0</td>
<td>24.0</td>
<td>21.4</td>
<td>29.9</td>
<td>29.9</td>
<td>40.7</td>
<td>0.7 times</td>
</tr>
<tr>
<td>Vegetables and gourds (kg)</td>
<td>130</td>
<td>143.3</td>
<td>76.0</td>
<td>73.5</td>
<td>128.4</td>
<td>215.8</td>
<td>215.8</td>
<td>245.9</td>
<td>1.7 times</td>
</tr>
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</table>

With the acquisition of independence, the Republic of Tajikistan faced a number of difficulties, which include the agricultural sector: collective farms, cooperative association of peasants, state farms and inter-farms, created in recent years «Farm» which amounted to 87594 farms in 2020, according to compared to 2010, it was 36222, which is 70.5% more.
Indicators of the dynamics of the diversity of forms of management in agriculture of the Republic of Tajikistan in table 2.

**Table 2.** Dynamics of the diversity of forms of management in agriculture of the Republic of Tajikistan [2].

<table>
<thead>
<tr>
<th>Business entities</th>
<th>Number of business entities</th>
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<tbody>
<tr>
<td>Collective farms</td>
<td>206</td>
</tr>
<tr>
<td>Cooperative association of peasants</td>
<td>362</td>
</tr>
<tr>
<td>State farms</td>
<td>280</td>
</tr>
<tr>
<td>Inter-farms</td>
<td>20</td>
</tr>
<tr>
<td>Operating or rental farms</td>
<td>50</td>
</tr>
<tr>
<td>Farm Association</td>
<td>-</td>
</tr>
<tr>
<td>Collective dehkan farms</td>
<td>-</td>
</tr>
<tr>
<td>Agricultural firms</td>
<td>-</td>
</tr>
<tr>
<td>Joint stock companies</td>
<td>-</td>
</tr>
<tr>
<td>Agricultural cooperatives</td>
<td>44</td>
</tr>
<tr>
<td>Auxiliary farms of enterprises and organizations</td>
<td>219</td>
</tr>
<tr>
<td>Farms</td>
<td>12344</td>
</tr>
<tr>
<td>Total:</td>
<td>1181</td>
</tr>
</tbody>
</table>

According to Zagaitov I B, during this period, a systemic state crisis began in all states of the Commonwealth, therefore ensuring food security became the first condition not only for state policy, but also for elementary survival [3].

In the current situation, all hope was on the rural population, which began to produce the largest share of agricultural products on their household plots and households.

At the initial stage of reforming agriculture in Tajikistan, mainly family and individual forms of labor were developed. Gradually, these forms of entrepreneurship covered all regions.

At the same time, we note the fact that such entrepreneurship was not characteristic of agriculture in Tajikistan, because here from time immemorial (both in the period of the Asian mode of production, and in the communal system, and in the period of socialism) the collective form of labor dominated.

Unfortunately, in the post-reform period, the formed housewifely entities had almost no financial support from the state, and if it was provided, it was not targeted.

In developed countries, agricultural production is mainly carried out by family and private - individual farms. Let us refer to the example of the United States, where farms predominate: individual family farms, family-group farms (partnerships, family corporations, etc.). These are relatively small housewifely units that allow production on the basis of family capital using credit and partially hired labor, whose share in the total number of average annual employment in agriculture is approximately 35%. Large joint-stock companies are also engaged in agricultural production.

In the structure of organizational forms of the agricultural sector of the US SEC (by number), individual family farms make up 77%, family-group farms - 13, and joint-stock companies - 10% [3].

However, it should be noted that the dominant trend in agribusiness in US agriculture is the constant increase in the minimum scale of production per enterprise. This contributes to a reduction in the total number of farms and an increase in the role of large farms.
In our opinion, when reforming traditional agricultural enterprises in Tajikistan, one should not go for the creation of small dekhkan farms on their basis, destroying the existing system of production and housewifely complexes with their corresponding material and technical base and agrotechnical services. Moreover, small dekhkan farms do not always meet the requirements of modern scientific and technological progress, they cannot always acquire new equipment, etc. To this it should be added that due to the lack of a developed production infrastructure (Agro service) and the weak development of horizontal and vertical cooperative and integration ties, as well as due to the poor production of small-sized agricultural machinery, the effective functioning of small farms is very complicated. For the full realization of the potential of farms, first of all, the broad development of horizontal and vertical cooperative ties is required. Small cooperatives, farms, family farmers can for the time being limit themselves to participation in supply and marketing, trade, credit cooperatives that process agricultural raw materials.

The experience of countries with sustainable development testifies to the great role of cooperation in the effective functioning of small farms. For example, in the United States, about 30% of agricultural products are sold through marketing cooperation, including 77% of milk, 38% of grain and soybeans. Through supply cooperation channels, 20% of farm supply goods are purchased, including 27% of the means of production. In the countries of the Common Market, cooperatives are involved in the production of 60% of the final food products, including production services and the supply of farms, the procurement, processing and marketing of agricultural products. For example, 72% of US small farms, owning 31% of machinery and equipment, concentrating 44% of the labor force, produce 10% of gross farm income [4]. In Germany, cooperatives process 80% of milk, 50-55% of grain and vegetables, 25% of beef and pork, and supply agriculture with up to 52-53% of the necessary means of production. In Japan, the share of cooperatives in the marketing of agricultural products reaches 95-100% (including 100% of rice). In Sweden, Denmark, Norway, Finland, cooperatives account for more than 70% of agricultural sales and up to 55-60% of the supply of agricultural inputs to farms. In France and Germany, 20–25% of farmers regularly use the services of cooperatives for the sharing of equipment [5].

Without cooperation, as modern world experience shows, many forms of management simply will not survive. This applies primarily to farming. Therefore, developing new forms of management on the basis of the transformation of property relations inherited from the previous system, special attention should be paid to the development of horizontal and vertical cooperation of agricultural producers in the republic.

In the official literature and laws of Tajikistan, collective property, one way or another, takes place. The latter is represented, first of all, by the cooperative property of collective farms, consumer and other forms of cooperation, as well as joint-stock property and property of joint ventures.

Cooperative ownership is common in many industrialized countries of the world. In their «cooperative movement operates as a 'third alternative' to private and public ownership, based on the principle of democracy and enjoying broad popular support» [7].

The strongest positions in the cooperative sphere of activity of developed countries belong to agricultural cooperatives. The positions of cooperatives are strongest in the field of agriculture with related other industries. Cooperative farms are of the greatest importance in the areas of processing and marketing agricultural products, supplying means of production, lending and production services. «In the Scandinavian countries, they sell up to 80% on the domestic and foreign markets, and in Japan even over 90% of the marketable products of the agricultural sector. In the Netherlands, this figure is 60-65%, in Germany, France and Spain - 50-52, in the USA, Great Britain, Italy and Belgium - 30%» [8].
It seems to us that, regardless of the agrarian policy, the organization of any form of management, with the establishment of appropriate mechanisms for their functioning, is effective.

There are factors that attract people to the organization of production cooperatives: higher wages, the opportunity to receive fair remuneration for more productive and skilled work; freedom from the systematic dictates of higher organizations and, consequently, the opportunity to show personal, including entrepreneurial, initiative, and, finally, the ability to profitably place money savings that have arisen both legally and sometimes not quite legally. All these factors play a big motivational role.

Of all the functioning new forms of management in the agriculture of the republic, the most promising, in our opinion, are joint-stock companies, associations of farms and agricultural cooperatives. In them, there is a real change in property relations, as a result of which the direct producers become true owners interested in the efficient use of all production resources. Therefore, when reforming traditional agricultural enterprises, it is necessary to create joint-stock companies on their basis or turn them into an association of small cooperatives, tenants, and family farmers.

Opponents of agrarian reforms often associate the decline in agricultural production in Tajikistan precisely with the reorganization of established forms of management that have developed during the years of building socialism, as well as collective agricultural enterprises that arose already during the transition to market relations on the basis of collective farms and state farms, into entrepreneurial structures inherent in a market systems.

4 Discussion

In our opinion, the ongoing agrarian transformations, the ongoing agrarian reform were not sufficiently well substantiated from a scientific and practical point of view. Something similar happened in other states of the Commonwealth. The course of reform that is actually being pursued needs adjustment, scientific justification and state regulation. The scientist - economist, agrarian Miloserdov V V believes that the reforms taking place in agriculture have not justified themselves. In his opinion, there are very few positive results of the reform, and they cannot be compared with the collapse of the agricultural sector of the country's economy, and the catastrophic impoverishment of the rural population [7]. According to Zagaitov I B during this period, a systemic state crisis began in all the Commonwealth states, so ensuring national security, especially food security, became the first condition not only for state policy, but also for elementary survival [8].

5 Conclusion

Thus, agricultural enterprises have almost completely lost the possibility of renewing and building up fixed production assets, acquiring working capital, and paying members of enterprises at least a meager salary (almost half the average for the national economy). The number of equipment used in the countryside has sharply decreased, the degree of wear has reached a critical level, and productivity has decreased. The supply of energy carriers, mineral fertilizers, and pesticides to farms has decreased several times. The reason is the lack of funds for agricultural producers to purchase these resources. As a result, production technologies are violated, agrotechnical measures are not carried out at the optimal time, production and product quality indicators are reduced, its losses increase and the cost increases.
It seems to us that only when agricultural production reaches the required level, especially when per capita consumption is ensured, only then can we talk about emerging market relations in agricultural production. It was then that all forms of competition fully function, which indicates the implementation of market relations and their dominance. Equations should be centred and should be numbered with the number on the right-hand side.

\[
\frac{d[F_1]}{d\omega_2} = SAm_2 \cos \omega, \quad \frac{d[F_1]}{d\omega_3} = SAm_2 \cos \omega
\]

(1)

Use italics for variables (u) and bold (\textbf{u}) for vectors. The order for brackets should be {[(])}, except where brackets have special significance.

The acknowledgements should be typed in 9-point Times, without title.

References

1. Tarakanovsky E 1995 State business of organizational and legal form. Publisher Name: Questions of Economics 12 76
2. Statistical Yearbook of the Republic of Tajikistan 2021. Statistical Collection, Dushanbe, ASPRT 484
3. Vidyapina V I and Zhuravleva G P 2000 Economic theory (political economy). Publisher Name: Textbook 328
4. Semyonov V 1999 Formation of effective models of management on the ground. Publisher Name: The Economist 1 14
5. Buzdalov Ch N 1998 Economics of agricultural and processing enterprises 28 44
8. Miloserdov O A 2000 Response to the supporters of the course of approaching reform of the agro-industrial complex. Publisher Name: management economics 1 18-30
9. Zagaitov I B 1999 What new economic course does Russia need. Publisher Name: Economics of agricultural and processing enterprises 9 14-16
11. Arabov F P, Cholikov D F and Gulbekova S J 2021 Regulation of water resources in irrigated lands of the Republic of Tajikistan. Publisher Name, Journal Kishovarz 1(90) 107-113