Peasant farms in Russia: trends and development forecasts

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Abstract. The article discusses the present state and development trends of peasant farms in Russia and Bashkortostan Republic. Their major production problems are demonstrated against the background of the present state of agriculture, the authors characterize the institutional environment of peasant farms operation, its impact upon the agrarian capacity of the region and investment activity of other organizational and legal forms of agricultural entities in the Republic. The article justifies the need to create agricultural production and consumer cooperatives, aimed at processing, supply, sales and service functions primarily, as well as to massively involve peasant farms in their structures. Thereby, the authors think, the efficiency of the agrarian sector of Bashkortostan Republic and, consequently, of Russia as a whole, will be significantly increased.

1. Introduction
Agri-food complex in Russia today is an array of various industries and enterprises, taking part in production and processing of agricultural goods, and peasant farms are one of its essential units.

Since the start of reforms peasant farms have substantially grown numerically, but, unfortunately, the suppositions that “farmers were to feed Russia” have not realized. Their problems differ, farmers are unable to solve some of them without massive financial support from the state, but some fully depend upon will and desire of farmers themselves, assisted by methodological participation of research workers. In other words, farmers need scientifically proved recommendations, elaborated while taking account of regional peculiarities and circumstances. First of all, this concerns establishment of major specialization of peasant farms, their optimal sizes, the choice of rational production technology, fitting edaphic-climatic conditions of the farm location, in animal husbandry in particular, their interaction with other market actors, including the creation of agricultural consumer cooperatives.

2. Research objective.
Main objective of this study is to justify the necessity of radical transformations in agri-food complex, including peasant farms as one of its essential units.

3. Research tasks.
To expose the dynamics and developmental trends of peasant farms in Russia and Bashkortostan Republic, to provide theoretically grounded and practically tested proposals aimed at boosting financial competitiveness of this economic form through mobilization of mostly internal reserves of peasant farms themselves. These, in our view, are: rationalization (optimization) of farm sizes, based on increasing average sizes and livestock numbers; 2) the choice of such agricultural production technologies which
possess their inner competitive advantages, including meat and dairy cattle raising and productive horse breeding and provision of feed for animals; 3) the creation of agricultural consumer (non-commercial) cooperatives with wide coverage of peasant farms, thus making it possible for them to consolidate their activities for improving their business efficiency, and to provide additional high-income jobs for municipalities, becoming the source of replenishing local budgets due to increasing base of personal income tax.

4. Materials and methods.
Statistical, analytical and institutional research methods were used in the study. Its materials are official statistical data of Baskortostan Republic and yearly accounting reports of agricultural organizations.

5. Bibliographical survey.
Authors view processes of structural change in economic forms in agriculture differently. E.g. in the opinion of Uzun V. Iu., Shagaida N. I. “the policy of reducing state participation in agricultural enterprises, the growth of property and management concentration in the hands of a smaller number of people, the growing proportion of agricultural enterprises in the production of agricultural produce, as well as state support of agricultural holdings played a positive part in the development of production.” [24]. This view, in our opinion, is rather controversial, because the agricultural industry is, as a rule, a matter of social significance, and the fact of its high dependence on climate conditions should stimulate active development of support policies by the state. There are small and middle agricultural commodity producers in rural areas, primarily aimed at food subsistence and self-employment. Thus leveling the importance of socioeconomic support of small and middle commodity producers would amount to their gradual extinction and dying out of rural areas.

We agree with the opinion of Uzun V., Shagaida N., Lerman Z. that “to continue its growth, the Russian agriculture is to bring back unused lands for growing and introduction of new technologies, to increase relatively low yields of agricultural crops and cattle [23]. This will allow to increase volume of the goods produced, to create new jobs, to strengthen food independence.

In the reform years major changes have occurred not only in dairy animal husbandry, where reduction of livestock numbers was partially offset by the growth of its productivity (Kuznetsova et al., 2019) [9]. In the transformative years labor force size in agriculture was reduced by eight times. Importantly, the most pertinent issues are those of reproduction of qualified personnel of working professions in agriculture and its outflow to other industries (Kuznetsova et al., 2019) [10]. Researchers are perfectly aware that workforce outflow out of agriculture is related to growing problems of poverty and low level of employee motivation in agriculture (Kuznetsova et al., 2018) [11].

We agree with the opinion of Uzun V. and Shagaida N. that «structural changes, which provided growth, had some negative consequences: expansion of agricultural holdings activities caused not only employment reduction in agriculture, but also rural population decline; proprietors and managers, not workers themselves have become primary beneficiaries of income growth and income in organizations and redistribution of added value” [24]. A substantial part of rural population is unable to find employment. In Baskortostan Republic only in 2018 more than 150 000 male rural inhabitants became migrant workers in search of better paid jobs in northern regions of Russia. Creating conditions for small and middle business in rural areas, in processing, sales and service organizations will make it possible to solve the problem.

In the opinion of Yanbykh, R., Saraikin, V., Lerman, Z., “potential membership in service cooperatives is from 3,8 to 7,5 millions of rural households or from 29% to 56% of rural households in 2017 [25]. This developmental trend will make it possible to preserve stability of culture, traditions and history of the agrarian country in rural areas.

Small producers of goods need to unite in agricultural cooperatives. In the opinion of Svetlov, N.M., Yanbykh, R.G., Loginova, D.A., “evaluating influence of the state support of corporate agricultural farms on their sales return in 14 Russian regions, diverse in terms of technologies, environment and
institutional circumstances, we see that in addition to the direct effect of the state support there are indirect effects through labour, capital and preservation of rural areas.” [22].

Chinese researchers claim that “rural decline is inevitable, because human society is experiencing transformation from agrarian to urban industrial and, later, knowledge economy”; “diversification of means of subsistence in rural areas, establishing market-oriented institutions and strong social capital promote sustainability increase of rural areas and creation of sustainable rural communities.” (Li, Westlund, Liu, 2019) [12]. Thereupon, to prevent rural degradation, discussed by the Chinese scholars, it is necessary to implement diversification and create new activities in rural areas; to develop small and medium business, to strengthen and develop human capital there.

6. Results

Data, provided by Federal Statistical Service in Bashkortostan Republic, demonstrate that major users of agricultural lands in the republic are enterprises, organizations and institutions, as well as households, involved in production of agricultural produce. By the beginning of 2018 they possessed 7063 000 hectares of agricultural lands, including 3644 000 hectares of arable lands and 3008 000 hectares of crops (Table 1).

![Table 1. Land use dynamics in Bashkortostan Republic, thousands of hectares [15]](image)

| Indicators                  | Y  | E  | A  | R  |
|----------------------------|----|----|----|----|
| All farms (other land users excluded) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Agricultural lands, total  | 5421 | 5378 | 5376 | 5361 | 5325 | 5340 | 5317 | 5428 |
| Area of arable land       | 3331 | 3293 | 3296 | 3285 | 3276 | 3277 | 3275 | 3352 |
| Crop area                 | 3147 | 3112 | 3060 | 3124 | 3103 | 3061 | 3076 | 3008 |
| Agricultural organizations | 4787 | 4723 | 4683 | 4625 | 4538 | 4508 | 4443 | 4493 |
| Area of arable land       | 2848 | 2799 | 2779 | 2744 | 2702 | 2680 | 2660 | 2714 |
| Crop area                 | 2548 | 2468 | 2358 | 2384 | 2303 | 2209 | 2138 | 1996 |
| Peasant farms             | 499  | 519  | 556  | 598  | 648  | 692  | 733  | 777  |
| Area of arable land       | 362  | 372  | 394  | 418  | 451  | 473  | 491  | 513  |
| Crop area                 | 481  | 524  | 583  | 619  | 681  | 736  | 828  | 910  |
| Households                | 135  | 136  | 137  | 138  | 139  | 140  | 141  | 158  |
| Area of arable land       | 121  | 122  | 123  | 123  | 123  | 124  | 124  | 125  |
| Crop area                 | 118  | 119  | 120  | 121  | 119  | 115  | 111  | 102  |

* Table composed on the data of “Bashkortostanstat” statistical compendiums.

From 2010 to 2017 the area of agricultural lands of agricultural organizations decreased by 6.1%, area of arable lands by 4.7%, crop area by 21.6%. Area of agricultural lands of peasant farms increased by 55.8%, their arable lands by 41.8%, crop area by 89.2%. Agricultural lands of households increased by 17%, their arable lands by 3.3%, crop area decreased by 13.5%.

There were also changes in use of agricultural lands (Figure 1).
Figure 1. Ploughness of agricultural lands in different economic forms in Bashkortostan Republic [16]

Data, provided by Figure 1, demonstrate that ploughness index of agricultural lands in Russian agricultural organizations was 59.5% in 2010 and 60.4% in 2017, i.e. it increased by 0.9 percent. Ploughness index of agricultural lands was 72.5% in 2010 in peasant farms, and became 66% in 2017, i.e. it decreased by 6.5 percent.

The structure of crop areas has also changed in this period in farms of all property forms in the Russian Federation (Figure 2).

In 2010 r. agricultural organizations possessed 81% of crop areas, but only 66.4% in 2017 Peasant farms owned 15.3% of crop areas in 2010 and 30.3%. in 2017. Households owned 3.7% of crop areas in 2010 and only 3.4% in 2017.

Figure 2. The structure of crop areas in farms of all property forms in Bashkortostan Republic [16]
Figure 2 demonstrates a steady growth of crop areas, belonging to peasant farms, mirrored by their reduction in agricultural organizations. Households possess a stable proportion of crop areas.

Generally, 695 agricultural organizations, included in the yearly consolidated report of the republican Ministry of Agriculture were involved in agricultural production in 2017. They owned 4493 000 hectares of agricultural lands, including 2714 000 hectares of arable lands. Peasant farms and individual entrepreneurs, involved in agricultural production, possess 777 000 hectares of agricultural lands, including 513 000 hectares of arable lands. They, as demonstrated by these statistical data, possess тыс. 910 000 hectares of crop areas (more than 30,2 % of all crops in the Republic). Upon 25 years of implementing “reforms”, diametrically opposed to world tendencies of concentration, rise of specialization and observance of major economic laws, we have the proportion of goods, produced by agricultural organizations of only 38,8%, and the growth of the proportion of goods, produced by peasant farms, demonstrates a steady growth tendency and increased from 3,9% to 11,3% in 2010-2017. In 2017 695 agricultural organizations of various organizational and legal forms were operating in the republic, including about two dozens large specialized pig-breeding and poultry complexes. The majority of other agricultural organizations have turned into small enterprises—one unit has, on the average, less then 4000 hectares of arable land, up to 200 milk cows; 50 workers with gross output of agricultural produce of 1,82 million roubles per worker (production realization proceeds are 1,05 million roubles per person, or 58 % of gross output value). We evaluate this average size of agricultural organizations decrease as a negative trend, enhanced by numerical growth of peasant small and micro-farms (average arable land per farm is about 80 ha, the number of cows – 8-10). Yearly agricultural production per one worker of a peasant farm is 25-30 percent less compared to agricultural organizations, if the average number of workers of a peasant farm is taken for 2, with all the attendant consequences (Table 2).

| Indicators | Y   | E   | A   | R   |
|------------|-----|-----|-----|-----|
|            | 2010 | 2011| 2012| 2013| 2014| 2015| 2016| 2017|
| Agricultural organizations |     |     |     |     |     |     |     |     |
| Number of businesses, total | 919 | 888 | 853 | 845 | 876 | 738 | 760 | 695 |
| Including loss-making | 113 | 55  | 82  | 75  | 98  | 29  | 50  | 46  |
| Workers, total, thousands | 58,3| 56,1| 53,7| 51,0| 47,4| 43,0| 38,5| 33,5|
| Per 1 business: agricultural lands, hectares | 5209 | 5318 | 5490 | 5473 | 5180 | 6108 | 5846 | 6464 |
| Per 1 worker: arable land, hectares | 63  | 63  | 63  | 60  | 54  | 58  | 51  | 48  |
| Workers | 83  | 84  | 87  | 91  | 96  | 105 | 115 | 135 |
| Cattle, number | 9   | 9   | 9   | 9   | 9   | 9   | 10  | 10  |
| Arable land, hectares | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4   |
| Including cows | 3   | 3   | 3   | 4   | 4   | 8   | 10  | 12  |
| Pigs | 0,44 | 0,66 | 0,65 | 0,80 | 0,94 | 1,34 | 1,67 | 1,82 |
| Gross output, millions roubles.* |     |     |     |     |     |     |     |     |

| Households |     |     |     |     |     |     |     |
| Number of businesses, total | 4509 | 4785 | 5203 | 5500 | 5857 | 6113 | 6276 | 6558 |
| Per 1 business, hectares: agricultural lands | 111 | 108 | 107 | 109 | 111 | 113 | 117 | 118 |
| Arable land | 80  | 78  | 76  | 76  | 77  | 77  | 78  | 78  |
| Cattle, number | 6   | 6   | 7   | 7   | 8   | 8   | 8   | 9   |
| Including cows | 8   | 5   | 4   | 2   | 2   | 2   | 1   | 2   |
| Pigs | 0,76 | 1,36 | 1,20 | 1,42 | 1,65 | 2,44 | 2,80 | 2,72 |
| Gross output, millions roubles.* |     |     |     |     |     |     |     |

* Gross output value in then-current prices.
This leads to the conclusion that such a developmental path of the agrarian sector in the republic does not leave peasant farms with any choices but to “enlarge” in all possible ways. Otherwise they do not have the opportunity to introduce rational crop rotation, thus leading to productivity reduction of their fields; secondly, due to their small size, peasant farms are unable to create a cheap and balanced food supply for livestock (it is not profitable economically to lay in good silo and haylage for a small number of livestock); thirdly, research and practice have firmly established for long that the increase of agricultural production scale is paralleled by cost reduction, and vice versa [7].

![Figure 3](image1.png)

**Figure 3.** Yields and productivity differences in agricultural organizations and peasant farms in Bashkortostan Republic from 2000 to 2017 [16]

Figure 3 demonstrates that, firstly, productivity of crop areas and cows vary greatly, indicating instability of their dynamics, both in agricultural organizations and in peasant farms and, secondly, a complete lack of positive impact of organizational and legal forms of agrarian businesses on these indicators.

In connection with the above, we think it is necessary to restore not only large farms with 600-800 cows, but also medium ones with 200-400 cows, localized in one settlement [13]. Thus we believe it is necessary to repair all livestock houses, without exceptions, requiring small capital investment and to fill them primarily with cows and young cattle. In so doing, to achieve that the number of livestock, served by one worker is no less than stipulated by technically justified norms. E.g. for veal calves in a house for 100 heads of livestock and group way of their maintenance on deep litter this norm is 40 calves per worker, and 60 heads for young cattle after milk-fed period (from 4 months to 1 year) (with grazing period of 155 days and stabiling period of 210 days) [18]. In so doing, it is specified that the average daily weight gain is 630 and 670 grams respectively.
In today’s circumstances these norms are impossible to follow both for peasant farms and medium-size agricultural organizations. This results in insufficient efficiency of production and cost recovery of only 80-90%. It could not be otherwise, given the achieved level of livestock productivity – the needed slaughter weight of 450-470 kg is achieved by young cattle, with 400 g average daily weight gain, in three years.

In parallel with increasing livestock number overall, it is necessary to work on raising the level of specialization of agrarian businesses and concentration of their production based on partnership and cooperation in rural areas irrespective of their organizational-legal forms. Dairy production will be efficient at the farms with at least 200 cows and restored self-supporting teams, involved in milk production, as well as young cattle breeding and feeding.

Another possible option – the creation of optimal-sized groups of young cattle at peasant farms, specializing in breeding and feeding (by transfer by contract or purchase). This opportunity can be used by both agricultural organizations and peasant farms. It will be more profitable for many of them to “get rid” of small numbers of young cattle, at least designated for selling, than to feed and breed them for 2-3 years.

One of the decisions to be made in the course of such organizational transformations, which will eventually determine financial competitiveness of the agrarian business, specializing in dairy and meat cattle breeding is the choice of a technology, possessing internal competitive advantages related to its location, in particular, a system of feeding and management of milk cows and meat and milk horses.

Experience has shown that, due to building agricultural giants ‘more and more farms to not provide not only for pasturage, but even for herding cows. Such businesses feed animals with the same feed mixture all year round” [17], and, therefore, the industry, ignoring use of natural pastures, does not fully utilize its resource potential for obtaining food; secondly, it loses one of its major advantages in relation to its Western competitors, allowing a significant increase of its production costs; thirdly, it reduces areas of arable lands, which could be used for increasing production of more marginal commercial crops, thus obstructing the growth of efficiency and profitability of plant growing industries and, consequently, of the whole agricultural industry.

Gerasimova O. A. analyzed the issue and demonstrated that “lack of livestock pasturing causes increased costs of dairy production, reduces productive longevity of cows to 2.8 years; the system of pasturage uses agricultural lands more intensively: for 100 hectares realization of milk is 16.9% greater, profit is 39.1%» greater [3].

Thus the grounded selection of livestock feeding and management in summertime exerts substantial influence upon financial competitiveness of agrarian businesses, specializing not only in animal husbandry production, but also in productive horse-breeding, irrespective of their organizational and legal forms.

Thus, according to evidence provided in an article, comparing major economic indicators at farms, using different methods of horse management [1], the herd method, providing for maximally possible, virtually year-round use of natural fodder-producing areas, turns to be several times more profitable compared to stable and pasture management – its cost-effectiveness level is 6.4 times higher and loss-free koumiss production volume is 5 times lower.

A model peasant farm, producing koumiss in this case envisages 6 able-bodied workers, about 400 hectares of agricultural lands, including 70 hectares of arable land [5].

Stishkova E. V. writes that using rationally natural fodder-producing areas for pasturage and laying in housing fodder, it is possible to obtain 4500 kg of milk from one forage-fed cow without using concentrate feeds [21].

However, this requires a comprehensive development of grass seed production. In current circumstances this cannot be implemented not only by peasant farms, but also by medium-size agricultural organizations “on their own”.

Thus we put forward three variants of model peasant farms (with different numbers of able-bodied workers), specializing in fodder crops seed production, as well as in production of coarse herbaceous
forage; varieties of grasses and areas for growing them are recommended for the steppe zone of Baskortostan Republic (Table 3).

Table 3. Major characteristics of models

| Settings                      | Varieties |
|-------------------------------|-----------|
|                               | 1 | 2 | 3  |
| Number of able-bodied workers | 2 | 3 | 4  |
| Agricultural land, hectares   | 100 | 200 | 300 |
| Including arable lands        | 70 | 140 | 210 |

Besides lists of grass varieties and crop areas, the models contain a list of the required set of agricultural equipment for seed production and laying in herbaceous forage (hay, haylage and silo). All the variants envisage 2 workhorses, 4-2 cows and 8-4 heads of young cattle for meeting family needs in milk and meat [4].

Our previous calculations (average figures for Bashkortostan Republic) demonstrated that the cost price of one hundredweight of fodder units of seeded perennial herbs is 31.2 % more compared to hay, harvested from natural hayfields. It can be assumed that the cost price of the green mass of seeded perennial herbs is also higher, at least 30% more. Thus only the absence of cattle pasturage on natural pastures results in higher (up to 10-20%) prices of “summer” milk (up to 5-10% per year).

A substantial appreciation of milk, characteristic for year-round housing is caused by a significant growth of “transporting fodder to cows” costs. In the words of A. Chernov [2] “There are two ways of converting grass into milk – to bring cows to a pasture or to bring grass to cows. Fuel consumption of the second option “cow+equipment” is 7 times higher”. And this is true for New Zealand, with its wheat yield of 200 hundredweight per hectare” and “3 cows per hectare”, while in Bashkortostan Republic it is necessary to have up to three hectares of fodder-producing areas, per one basic cattle unit (a cow). Natural capacity of Bashkortostan Republic allows to harvest about 20 hundredweights of cereals per one hectare, which is 1,5 times less then the average Russian level and 10 times less than in New Zealand. This means that fodder transportation radius and, consequently, transportation costs are that much higher compared to them.

In other words, failure to bring cows to pastures causes drastic cost price increase and leaves republican agribusinesses no chance to achieve financial competitiveness not only with the West, but also with other regions of the Russian Federation.

Thus Bashkortostan farmers need to use New Zealand experience, with its 33-35% share of the world milk market as much as possible. In particular, it “gives answers” to question concerning rational farm size and optimal productivity of cows. E.g. Chernov A. [2] cites the following evidence: “the average farm size in New Zealand is 325 heads, and maximum efficiency of the pasturage system is achieved with cow productiveness of 4-5 thousand liters of milk per year” [2].

We obtained approximately these parameters earlier by calculations: the optimal yearly productiveness in Bashkortostan republic, given the fodder base and housing conditions is 4000-4500 kg of milk per 1 cow.

It can be considered that our calculations were proved in practice. E.g., in a republican LLC (a part of the yearly report data can be a commercial secret, so we decided not to give the official name of this LLC and its seven branches) cost price of one hundredweight of milk in the branch № 1 is 8,7-25,9-13,1% higher (productiveness of 1 cow is 5186 kg) than that of the cows, comparable in terms of productiveness, of branches № 2, 4, 5 (4653-4339-4670 kg respectively). In terms of the total sum of net income obtained from one cow the branch №1 is behind them even more - 3,2-4,3-6,4 times.

7. Discussion

The transformations, proposed above are aimed at solving the primary task of the Russian agri-food complex, which is, in our view, to catch up with Western countries in terms of financial competitiveness, particularly that of dairy and meat production. The task of increasing labour productivity in the industry up to the level of these countries can be regarded as impossible to achieve in the proximate future. This
can even require a complete replacement of the domestic production with imported livestock, equipment and technologies, building agrarian giants, etc.

There are several justifications for this claim:

- the Russian natural and climatic potential is, by estimates of Russian and international scholars, considerably lower than in many foreign countries. The bioclimatic potential (the aggregate indicator of warmth and water provision of the territory) of major agricultural regions of our country is 2.7 times lower than in USA and 2.2-2.4 times less than in Western Europe. Besides that, more than 70% of the territory is located in either extremely cold, or extremely dry zones [20, pp. 216-228]. For this reason domestic agricultural enterprises do operate and will operate under worse conditions and with lesser efficiency. Given the enumerated conditions for production, most industries of the Russian agriculture, even provided with equal technical resources and application of labour, which is unrealistic in the foreseeable future, will not become competitive compared to European countries and USA, which impose their intensive technologies upon the Russian agrarians.
- As far as Bashkortostan Republic is concerned, the situation is even more complicated – its agricultural lands are 1.6 times less fertile than the average Russian level. Almost half (46 %) of agricultural lands is, in turn, 10-30 % less fertile compared to the average republican level [18, p. 67]. This is the reason why laying in and preparation of fodder in Russia, let alone in Bashkortostan Republic, in principle cannot be less expensive (soil fertility is several times lower, transportation distances are several times longer, yearly fluctuations of output due to weather conditions are considerably higher, etc.).
- Investments in building farms, as well as other kinds of resources, are subject to “the law of diminishing returns”, i.e. starting from a certain complex (farm) size the economy on scale no longer covers the growth of expenditures, related to fodder production and feed intensification (transportation expenditures, expenditures on preparation of more nutritious and, thus, more expensive rations are growing); herd reproduction (feeding with concentrates for the growth of productivity “adversely affects health of cows, their productive longevity and reproductive functions”[14]. At the state farm “Alexeevskii” of Ufimsky district in Bashkortostan Republic this is the very reason of the yearly renewal of no less than 40% of cows, that is their productive longevity is 2.5 years maxmally. Investigations made by New Zealand scientists demonstrates that pasturage of cows provides for productive longevity of 5.6 years on the average.

Despite profound theoretical studies by researchers [14, 6], including the authors of this article, finding out the optimal productivity of cows, the level of cost price of milk for various feeding regimes, the rational level of livestock heads concentration and practical experience in acquisition of highly financially competitive milk while using less intensive (to put it more precisely, extensive) cattle housing technology [2], they are still plans to in Bashkortostan Republic to build mega-farms, expected to raise productivity to “8 thousand kg of milk per cow”… This was the requirement for the participants of the Program «500 farms” [15]. Besides that, to become a participant of the Program, an agricultural producer was expected to have a business-plan, envisaging, as a requirement, productivity growth of at least 4 % yearly and the growth of population of milk cows by 12-15 heads. Thus the republican agricultural officials follow the principle: “the higher the better and more efficient”, rewarding farm managers for high milk yields and weight gains, ignoring established indicators of economic efficiency and their linkage with the whole system of farm management. In our view, these demands cannot be made without economic justification. In the opinion of Kovtun O. I., Yapparova E. K., A. V. Chayanov “in his pre-revolutionary works emphasized development of small and medium businesses on the basis of work conception; the balance, assuming production and natural factors balance and the intention not to maximize profit of an economic unit, but to increase gross income” [8].

Other arrangement for increasing financial competitiveness of small and medium agrofirms is creating and joining agricultural consumer cooperatives, primarily processing, sales and service ones, taking part in the implementation of the departmental target program “Development of agricultural
consumer cooperation in Bashkortostan Republic in 2015-2017.”

Evidence, supporting, as a matter of priority, organization of processing and sales cooperatives specifically, is the following: in 2016 all agricultural organizations, subordinate to Ministry of Agriculture of Bashkortostan Republic, got on the average 3.45 roubles of profit from realization of 1 kg of milk; in this very year the state farm “Alexeevskii” of Ufimskii district earned 3.2 times bigger profit per each kg of milk, despite the fact that it production cost price (19.37 roubles per kilo with the average milk yield of 8055 kg per cow) was higher than the average of the republican agricultural organizations (15.38 roubles per kilo with milk yield of 4716 kg per cow). The state farm “Alexeevskii” achieved these results due to its own processing unit with the yearly productivity of 6000 tons and realization of finished goods to the final consumer.

This example demonstrates that to increase profits from the production of agricultural goods it is necessary to organize production, processing and sales by producers themselves, joining agricultural consumer (non-commercial) cooperatives. To obtain the amount of trade milk to provide efficient charge of a consumer cooperative of comparable capacity, an “effort” of at least 10 medium-size agricultural organizations and an order of magnitude more peasant farms is required.

Organizing integrated economic forms with a closed cycle (production, processing, storage and realization of the produce) with a true motivation and responsibility of the members in terms of the end results of operation will make it possible to raise the level of financial competitiveness of all participant agricultural cooperatives.

Despite some growth of the average size of peasant farms in the republic, it is not possible to consider their size rational, because they cannot technologically catch up with large-scale agricultural organizations and, in most cases, are behind them in terms of economic efficiency. Let us enumerate some reasons for this which are well-known and do not require proof:

• firstly, the traditional agricultural system with its low level of work mechanization is preserved;
• secondly, scientifically grounded crop rotations, elaborated in accordance with edaphic-climatic conditions of the territories, where they are located, are violated or, rather are completely absent at many peasant farms;
• thirdly, the economy of scale effect is lost, both in production, particularly in animal husbandry, and in the market sphere. All that, eventually, influences negatively economic efficiency of these farms.

8. Conclusion

• In our view, stable state support policies are needed for those agricultural producers which increase their yearly production. A scope of this support should be proportional to the volume of output.
• Agrofarms of various organizational and legal forms should operate in close coordination both in creating and joining agricultural cooperatives and in forming various unions.
• It is necessary to develop domestic agriculture based on resource-saving technologies, possessing internal competitive advantages on the local level, allowing to create additional jobs.
• Development of small economic forms will make it possible to preserve rural areas as the major source of replenishing rural manpower and qualified cadres for professional agriculture.
• It is necessary to engage in agrarian logistics and marketing to provide a stable demand for the produce and bringing it to external and foreign markets.
• For peasant farms, located close to each other, it would be useful to merge their arable lands in a single land mass to introduce rational crop rotations there.
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