Food Security in the Far East: New Approaches to Solving the Problem

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Abstract. The implementation of the socio-economic development programme of the Far East sets tasks to increase the permanent population of the Russian Far East. This problem cannot be solved without a corresponding increase in the food supply of the macro-region. The relevance of the study is conditioned by the need to modernize the system of food supply of the Far Eastern territories, taking into account external threats. The article examines approaches to agricultural development and solving the problem of food security in the Far Eastern regions of Russia. The author considers the potential for the permanent population of the Far East to produce enough food for self-sufficiency and assesses the impact of preferential regimes on agricultural development and food security. The author analyzes the current regulatory acts and the results of their implementation, on the basis of which he evaluates the effectiveness of public policy in modern conditions and proposes recommendations for solving the problem.

1 Introduction

A significant imbalance in the development of Russia's regions has led to an outflow of the permanent population from the Far East to central Russia over the past 30 years. The sharp decline in the permanent population in the areas bordering the densely populated countries of East Asia (Japan, South Korea, China) may contribute to geopolitical problems in the future. In this regard, since 2014, Russia has adopted and has been implementing a state programme for the development of the Far East. However, population growth requires a parallel increase in food production. Thus, ensuring food security in the Far Eastern Federal District has become one of the top priorities.

To attract investors, create new jobs, and increase the permanent population of the Far East, the state has developed a state programme [3], established preferential regimes [1, 4], and implemented other measures.

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2 Materials and methods

Analyzing the views available in the scientific community on the problems of food supply to the Far Eastern regions and the ways of their solution, the author has not found in the scientific literature coverage of the impact of preferential regime - resident of the advanced special economic zone (hereinafter - resident of the ASEZ) on the solution of this problem. In this regard, the author has set himself the task to evaluate the effectiveness of the applied preferences and achievements of recent years using the methods of analysis and comparison of various statistical data. The object of the study is the investment situation in the macro-region, while the subject of the study is the indicators of investment dynamics and job creation in the agricultural sector.

3 Results

The author considers it reasonable to divide the territory of the Far East into two subregions. The southern part of the Far East is located in a rather favorable climatic zone and is relatively well provided with both communications and water resources necessary for agricultural development. The author refers to Sakhalin Oblast (SO), Primorsky Krai (PK), Zabaykalsky Krai (ZK), Khabarovsk Krai (KK), Amur Oblast (AO), Jewish Autonomous Oblast (JAO), and Republic of Buryatia (RB) as such regions. Kamchatka Krai (KK), Magadan Oblast (MO), and Chukotka Autonomous Okrug (CAO) are located in the north of the Far East and have unfavorable conditions for agricultural development. Most of the Republic of Sakha (Yakutia) (RS) is in the same situation. Based on this, the author considers it reasonable to assign four regions to the risk group.

Preferential regimes have been introduced in some territories of the Far East since 2014. An example of territories where preferential regimes have been established is the CAO [3]. There are also large-scale investments in agriculture since then.

Table 1. ASEZ residents implementing investment projects in agriculture and food industry (compiled by the author)

Region	Residents	Investments (thousands of rubles)	Jobs created
CAO	12	2 135 864,8	253
KK	14	5 410 693,8	577
MO	0	0	0
RS	3	1 911 360,0	159
Total for the North of the Far East	**29**	**9 457 918,6**	**989**
PK	90	126 902 519,8	12 545
HK	9	14 520 964,0	1 620
SO	6	12 278 739,4	919
AO	5	5 733 044,6	974
RB	3	4 300 006,7	374
ZK	7	1 574 547,6	337
JAO	0	0	0
Total for the South of the Far East	**120**	**165 309 822,1**	**16 769**
Total for the Far East	**149**	**174 767 740,7**	**17 758**

In total, as shown in Table 1, 149 investors decided to invest in agriculture during the 10 years of the preferential regime in the Far East. There were also 39 projects with investments of 0.5 billion rubles and more. Among them, 8 projects were launched after the start of the SMO and the introduction of new sanctions against Russia. Many of the projects have already been completed.

Table 2. Largest investment projects being implemented within the framework of ASEZ in the North of the Far Eastern Federal District (compiled by the author)

Region	**Residents**	**Project start date**	**Project Name**	**Investments** (thousands of rubles)	**Jobs created**
CAO	OOO «Arctic Atom-Servis»	12.07.22	Greenhouse complex, food and beverage production plant in Pevek	1 088 896,0	158
	Tyntin A.V.	26.07.18	Greenhouse complex «Tyntin»	900 000,0	28
KK	OOO «TK Kamchatsky»	07.10.20	Greenhouse complex «Kamchatsky» (3,6 ha)	2 367 380,0	100
	OOO «Sokoliny centr Kamchatka»	11.12.20	International Center for Rehabilitation, Reproduction and Conservation of Rare Birds of Prey in Kamchatka	1 500 000,0	60
	OOO «Kamchatskiy broyler»	01.09.16	Poultry farm with production capacity of 4.5 thousand tons per year	730 296,2	127
	OOO «Svinokompleks Kamchatskiy»	30.03.16	Pig production facility (550 sows)	664 200,0	86
RS	OOO «Sayuri»	01.06.16	Year-round greenhouse complex	1 896 718,6	108

The largest agricultural investment project in the ASEZ "Chukotka" is the project of A.V. Tyntin to build a greenhouse complex with the total area of 10,080 m². In addition to the greenhouses, it was planned to organize a vegetable processing plant (196 m²). The project was to be completed by the end of 2023. However, while the planned investment was 900,000 thousand rubles, the actual investment amounted to only 20,063.2 thousand rubles (2.2%) by mid-2023. The project was not implemented within the established timeframe, and 12 out of the planned 28 jobs were created. As a positive fact, the authors point out that the project is operational and products are being manufactured.

Recognizing the problem of attracting investments to the North, the state expanded the preferential regimes of the Arctic regions of the Far East by introducing a new status—resident of the Arctic Zone (AZ) [2]. This has allowed the CAO and RS to attract additional investments over the last three years.

Table 3. Quantitative indicators of investments in agricultural projects by the investors in the Arctic zone (compiled by the author)

Region	**Residents**	**Investments** (thousands of rubles)	**Jobs created**
CAO	2	1 131 396,0	164

RS	1	114 491,2	14

All of these projects are in the active stage of implementation.

As can be seen from Table 1, the number of investment projects and the volume of investments directed to the development of the southern part of the Far East are dozens of times higher than those in the north.

Table 4. Largest investment projects being implemented within the framework of ASEZ in the South of the Far East (excluding the PK) (compiled by the author)

Region	**Residents**	**Project start date**	**Project Name**	**Investments** (thousands of rubles)	**Jobs created**
HK	OOO «DVK TTK Eastside»	06.02.23	Grain drying complex, soybean oil and soybean meal production complex	863 778,0	30
	OOO «TK Khabarovskiy»	26.02.21	Greenhouse complex (11.09 ha)	4 215 042,0	171
	OOO «TC Priamurie»	29.05.19	Greenhouse complex (7.4 ha)	1 300 350,0	73
	OOO «Grinagro-Khabarovsk»	27.08.18	Dairy plant (up to 21 thousand tons of dairy products per year)	4 776 066,0	305
	OOO «Skifagro-DV»	02.10.17	Pig production facility (70,000 pigs per year) in Vyazemsky and Khabarovsky districts	2 146 000,0	92
	OOO «JGC Evergreen»	19.10.15	"Evergreen Greenhouse Complex" for growing vegetables	1 036 500,0	128
SO	OOO «Green Agro-Sakhalin»	26.08.16	Enterprises producing agricultural crops, mixed fodder, milk, meat, cattle (Troitskoe, Bereznyaki)	9 370 000,0	533
	JSC «Sovkhoz Teplichniy»	09.08.16	Greenhouse complexes (2.9 ha and 4.07 ha)	1 511 775,4	179
	JSC «Mercy Agro Sakhalin»	30.06.16	Pig production facility (62,000 pigs per year) in Taranay village	1 183 000,0	113
AO	OOO «MEZ Amursky»	16.11.15	1) Plant for deep soybean processing. 2) Feed production facility. 3) Reconstruction of the Seryshevsky elevator	5 318 834,1	806
RB	OOO «Buryatmyastorg»	30.05.23	Reproduction and fattening ground for young beef cattle	2 058 030,0	221
	JSC «Svinokompleks Vostochno-Sibirskiy»	23.12.20	The second stage of JSC «Svinokompleks «Vostochno-Sibirsky»	2 142 810,0	140
ZK	LLC «Novoye Beklemishevo»	04.03.22	Grain production enterprise	546 630,0	102
	OOO «ZK Teros»	02.09.21	«Teros» Agroholding	821 050,0	133

As can be seen from Table 2, the leader in attracting investments in agriculture is the PK, which attracted 72.8% of all investments (60.4% of investment projects), on the territory of which the largest investment projects are being implemented, creating 70.6% of new jobs in agriculture.

Table 5. Largest investment projects being implemented within the framework of ASEZ in the PK (compiled by the author)

Residents	**Project start date**	**Project Name**	**Investments** (thousands of rubles)	**Jobs created**
OOO «Kengrow»	10.04.18	Agricultural enterprise	813 810,0	25
OOO «Skif Plus»	16.06.23	Multifunctional grain farming complex with a linear elevator	2 009 688,0	250
OOO «TC Primorsky»	15.05.23	Greenhouse complex "Primorsky" (growing roses and annual flower crops)	4 661 300,0	191
OOO «NK Galatea»	17.03.23	Greenhouse complex in Mikhailovsky District, Primorsky Krai	5 475 550,0	275
OOO «Arnika-Holding»	30.12.19	Agro-bio-economic cluster	15 583 333,0	350
OOO «Greenbioenergy»	26.03.19	Topinambur and soybean deep processing projects	8 594 060,0	329
OOO «NK Lotos»	18.05.18	Greenhouse complex	2 352 689,0	260
OOO «Moloko Primorye»	02.03.18	Development of an agro-industrial complex for cow's milk production and processing	1 615 117,0	160
OOO «THRus Primorsky»	06.09.17	Livestock breeding complex and dairy plant with the processing capacity of 250 tons of milk per day	13 643 459,2	362
JSC «PLK Primkon»	28.12.15	Food processing plant	8 307 424,3	1 400
OOO «Rusagro-Primorye»	25.12.15	Pig production facility, production of mixed fodder, grain elevator	35 638 450,0	2 045
OOO «Primorsky Bacon»	30.11.15	Pig production facility (500,000 pigs per year)	6 222 000,0	274
OOO «Mercy Trade»	30.11.15	Feed mill and elevator complex	10 931 000,0	819
OOO «Agromir»	20.09.22	Diversified agricultural enterprise	685 222,0	192
OOO «Dalpischeprom»	22.04.20	Agricultural complex for production of open and closed ground vegetables	634 294,9	65
OOO «AT Solard»	19.12.19	Livestock breeding complex with dairy cattle (production of milk and dairy products)	541 834,7	102
OOO «HAPK Green Agro»	01.10.19	Second cattle-breeding complex (2500-head dairy herd) in Alekseevka village	2 565 151,0	209
OOO «Abalon»	11.06.19	Fish processing plant	1 050 435,0	197
Miroshnichenko S.D.	30.03.18	Poultry farm for turkey meat production	1 063 022,0	100

As a result, the total volume of agricultural products produced in the Far Eastern Federal District increased by 10.5% in 2022 compared to 2021, amounting to 294 billion rubles. The volume of crop production for the same period increased by 16.9%, reaching 168 billion rubles. The sown areas of the Far Eastern Federal District amount to 2.2 million hectares, 50% of which are in the AO and 23% in the PK. However, it should be noted that crop yields in the Far Eastern Federal District are lower than the national average.

The volume of livestock production in the Far Eastern Federal District in 2022 increased by 1.9% compared to 2021, amounting to 127 billion rubles. The main suppliers of livestock products are PK (21.8%), RSY (16.5%), KK (16.4%), and AO (14.3%). At the same time, the volume of production of livestock and poultry for slaughter in 2022 increased by 11.6% compared to 2021.

The food security of the population of the Far Eastern Federal District is still lower than the Russian average, but in 2021 it reached the level of self-sufficiency in grain and legumes approved by the Food Security Doctrine.

Taking into account the projects under implementation, the agricultural production in the Far Eastern Federal District is expected to reach 411 billion rubles by 2026.

The author also emphasizes that the positive results of the fishing industry were not considered in this article. A significant share of food consumption in the Far Eastern Federal District consists of seafood and fish.

4 Discussion

The development of the Far East has been in the focus of the scientific community for a long time. General problems and prospects of socio-economic development of the Far East have been considered by I.S. Khvan [12] and others. The assessment of the effectiveness of state support measures for the residents of preferential regimes in the Far East, as well as the prospects for their implementation, have been explored in the studies of D.A. Yakovenko, M.D. Yakovenko, [20, 21, 22], and others.

The problems and tasks related to food supply of the Far Eastern regions, effective use of agricultural land and food security, and the role of agriculture in the socio-economic development of the Far East have been considered in the works of A. I. Egorova, V. A. Yakovlev [5], V. A. Ivanov [6, 7], P. Y. Ivanova, S. A. Neustroev [8], N. Ivashina, E. Kocheva, N. Matev, O. Nesterova, E. Oleinik, E. Tyurina [9], A. P. Latkin, I. V. Zhupley, S. V. Kuznetsov [10]. Kocheva, N. Matev, O. Nesterova, E. Oleinik, E. Tyurina [9], A. P. Latkin, I. V. Zhupley, S. V. Kuzmina [10], L. L. Pashina [11], V. V. Reimer, A. V. Ulezko, A. A. Tyutyunikov [13], N. V. Rodnina [14], E. D. Rubinstein, O. N. Blinova [15], G. I. Sukhomirov [16, 17], A. V. Ulezko, L. L. Pashina [18], D. A. Yakovenko, S. N. Arkhipov [23], and others.

However, the issue of changes in investment activity in agriculture after the imposition of sanctions against Russia has not been thoroughly reflected in contemporary studies. Thus, the relevance of the present study is obvious.

5 Conclusions

The author believes that due to climatic and other conditions not all regions of the Far East can solve the problem of food security independently. At the same time, the author notes that after the introduction of sanctions, as response to new challenges, investment activity in agriculture has significantly increased in several regions of the Far East. This suggests that if this trend continues, the southern regions of the Far East will significantly increase their autonomy in providing the population with agricultural products.

It is necessary to reduce the dependence of the regions on external suppliers of food products. Therefore, there is an objective need for state support for the active development of agricultural production in the Far Eastern regions.

The experience of introducing preferential regimes has shown their viability and effectiveness in solving the above problems.

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