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Development of farms in wartime conditions

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► **Abstract.** Farms form an integral element of territorial entities and local culture: they use a variety of agricultural systems, promoting a balanced diet and preserving the environment. In wartime conditions, farms have a unique potential for creating productive and sustainable food systems. All these features indicate that the study of the system of farm development is relevant and has both theoretical and practical significance. The purpose of this study was to substantiate the theoretical and methodological principles, socio-economic and legal issues of the activities of farms in the conditions of martial law. The methodological framework of the present study included the provisions of system analysis and economic theory. To generalize results, monographic, normative, graphic, abstract-logical methods and approaches were used. It was found that the conditions for staying on the single tax of group 4 are the most beneficial for farms, since the tax is fixed and depends solely on the volume of land plots. It was established that personal farms have the opportunity to implement their activities in the form of entrepreneurship for individuals-entrepreneurs who have organized a family farm. The study characterized individual family farms in Lviv, Zakarpattia, and Chernihiv regions. It was established that during martial law, the state allocates funds under special grants and subsidies to support the development of farms. It was found that the most adapted to the crisis conditions associated with military actions are farms and household plots. The results of the study can be considered in the development of regional programs for the development of agricultural business entities; the development of regulations for the formation and development of cooperation and integration in the agricultural sector of the economy

► **Keywords:** business entity; adaptation to martial law; farming; household plots; agricultural cooperative; integration and cooperative structures; integration associations

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► Introduction

Farms are an essential component of the agricultural sector of the economy and an effective mechanism that contributes to expanding employment and increasing the incomes of the population in rural areas. The organization and activity of family farms were established by the Law of Ukraine No. 1788-IX “On Amendments to Certain Legislative Acts of Ukraine on Stimulating the Activities of Farms” dated 24.09.2021 (The Supreme Council..., 2022). The need for legal consolidation of such an economic structure is caused by the fact that household plots factually operate as family farms.

Family farms are the most motivationally oriented (the owner is the head of the family, the farm is owned by the family, and the family holds shares in its capital). The effective development of entrepreneurship as the main driving force in the development of the country's agrarian economy depends on the state of the business and market environment.

Considering the functioning of farms in extreme conditions, most researchers paid attention to the expediency of their creation; the formation of social capital of farms and private farms, and the military and economic significance of business entities. Economists' attention is focused on the problems of infrastructure support for rural areas and the assessment of target parameters of the anti-crisis stability of enterprises.

In the published studies on the problems of the development of farms, the main attention was paid to the essence of the concepts, the need for state support, the assessment of the impact of the external environment, and the criteria for assessing the investment status of subjects. But the issues of the development of farms in the conditions of martial law have been neglected. In addition, the issues of methodological foundations of estimation – indicators that identify the effectiveness parameters of social development processes, which concerns family farms, have not been further developed. These issues are discussed in this paper, with particular examples of the effective functioning of family farms.

Yu. Lupenko *et al.* (2021) state that the use of modern production technologies is one of the main areas of development of the farmer's activity. M. Odnorog *et al.* (2019) established that entrepreneurs are most adapted to extreme operating conditions, and the activities of inefficient institutions in the state reduce the guarantees of property rights and the level of life of the villager.

T. Ivanyuk *et al.* (2020), argued that during the cooperation of farmers' associations, the start-specialization mechanism should be implemented as an opportunity for additional financing of development, considering the features of innovative resources, the territorial, or local socio-economic system of functioning. I. Yatsiv and Yu. Solovei (2019) found that the imperfection of forms of social capital hinders the involvement of small agricultural entrepreneurs in integration processes.

H. Molnar (2021) substantiated models of strengthening, commercialization, and differentiation of

farm activities. H. Sanikidze (2021) covered methodological provisions regarding the creation and functioning of farmer organizations and agricultural cooperatives. N. Gafarov *et al.* (2023) substantiated that the cooperation of private farms can improve the socio-economic living conditions of the rural population.

D. Shyian *et al.* (2021) analysed the situation in households from the standpoint of income, expenses, food quality, and consumption of individual products, and assessed potential opportunities for the development of the organic products market. Notably, S. Strapchuk & O. Mykolenko (2022) analysed household expenses as a component of estimating their financial condition. J. Junaidi *et al.* (2022) found that household food security is related to survival strategies and the socio-economic characteristics of the family.

S. Ierokhin *et al.* (2022) found that small and medium-sized entrepreneurship in agriculture is a basic economic tool for the development of civil society. S. Kalnyi (2022) claimed that cooperation, vertical integration, and association reflect areas of organizational transformation of farms. D. Nemish and M. Humenyuk (2022) established that work experience and high flexibility of management reflect the strengths of the development of small business entities.

The present study substantiated the essence of the transformation of household plots into family farms in the conditions of martial law, which proved their effectiveness. Small farms have advantages over large enterprises that have suffered large losses as a result of military operations. Working under conditions of limited access to credit, farms need to address market gaps to have a form of guaranteed co-financing.

The purpose of this study was, from the standpoint of a systemic approach, to evaluate and substantiate the theoretical, methodical, and practical principles of entrepreneurial activity of farms in the agrarian sector of the economy of Ukraine in wartime conditions.

► Results

Family-type economic entities. In Ukraine, several distinct entities belong to family-type farms. These are farms – legal entities; family farms (FF) – individuals-entrepreneurs; and other entrepreneurs working on small plots of land, but not registered as farms. There is a certain informal gradation of economic entities according to the amount of land under cultivation: small farmers-entrepreneurs – up to 100-200 ha; medium – 200-10,000 ha; large farms – over 10,000 ha. According to Article 55 of the Economic Code of Ukraine (State property fund..., 2022), the qualification of business entities is determined by two criteria: the amount of income from any activity and the number of employees.

Micro-enterprises include enterprises with an annual income of up to 2 million EUR. Small enterprises, respectively, include those with income from 2 to 10 million EUR. Therewith, considering the specifics of agricultural production (specialization), large

enterprises can also have separate thresholds from 500 thousand EUR to 2 million EUR. For instance, in a grain farm, up to 600-700 ha of land are in use.

Family farms that do not use hired labour and cultivate plots of up to 20 hectares are in the IV group of the unified tax. For these farms in 2023, the minimum tax liability will be set at half the standard amount – 2% of the standard land valuation, and later it will be increased to 2.5%. The share of agricultural production should be 75%. In the conditions of martial law, when the share of production becomes less than 75%, to confirm the status of a unified taxpayer, a copy of the decision of the regional council on unfavourable economic conditions that led to a change in the structure of production should be submitted to the tax authorities (State property fund..., 2022).

► **Development of entrepreneurs in agriculture.** For a long time, small farms developed in conditions of limited opportunities, as Ukraine's agricultural policy was focused on supporting large business structures. Furthermore, legislative initiative No. 3131 ("On amendments to the Tax Code of Ukraine and other legislative acts of Ukraine regarding the de-shadowing of agricultural production") (Economic Expert Platform..., 2022) may limit the development of small farms. The purpose of the strategy for the development of entrepreneurship

and integration processes in the countryside in the post-war period is the development of an environment capable of ensuring employment and income growth of the able-bodied rural population, rural households, and communities, the development of rural areas based on entrepreneurial initiative, and household plots.

The draft order of the Cabinet of Ministers of Ukraine "On approval of the Concept of stimulating the development of entrepreneurship in rural areas until 2030" for the successful development of family farms proposes to focus on the development of the agricultural advisory system. Furthermore, attention is focused on long-term support for the development of small agrarian business entities and the activation of the creation of family farms (Order of the Cabinet..., 2021).

► **Number and main indicators of the functioning of small entrepreneurs.** Considering the positions of local self-government, it is important to form a balanced socio-economic activity of rural communities, which is ensured by the presence of an optimal number of business entities in the forms of management in agriculture of various scales with priority support for farms, various forms of cooperation as integration structures for the organization of joint activities (Tables 1-2).

Table 1. Dynamics of the number of entrepreneurs by forms of management in agriculture for 2027, thousand units

Entrepreneurs	2016	2017	2018	2019	2020	2021	2027 forecast	deviation 2021 in % to 2016
Number of agricultural enterprises, as of 01.11 of the corresponding year, including:	47 697	45 558	49 208	48 504	47 523	45 661	44 513	-4.27
Farms	33 682	34 137	33 164	32 452	31 851	31 257	30 123	-7.20
Family farms	-	-	-	64	48	151	247	
Production cooperatives	998	997	996	1 005	1 009	1 001	992	+0.30
Service cooperatives	949	1 017	1 073	1 207	1 270	1 274	1 265	+34.24
Household plots	4 075.2	4 031.7	3 996.5	3 975.1	3 954.8	3 921.5	3 782.8	-3.77
Individuals-entrepreneurs	23 458	21 201	20 922	20 337	19 354	18 876	16 341	-19.53
Horticultural companies	-	-	-	-	-	4 128	4 135	

Note: 1) the data are presented without considering the temporarily occupied territories; 2) household plot – a household, the members of which, according to the current legislation, are provided with a plot of land with the intended purpose "for keeping a household plot"

Source: research based on data (Economic statistics, 2023)

Table 2. Principal indicators of functioning of small entrepreneurs in agriculture

Indicators	2016	2017	2018	2019	2020	2021	deviation 2021 in % to 2016
Number of operating small entities. units	40 788	45 815	46 225	45 898	45 480	43 824	+7.44
– including individuals-entrepreneurs	23 458	21 201	20 922	20 337	19 354	18 876	-19.53
Equity at the end of the year. mln UAH	161 380.2	167 296.7	185 365.6	240 283.4	310 046.9	130 737.1	-18.99
Current financial investments (current financial assets) at the end of the year. mln UAH	1 241.6	800.9	858.4	907.7	721.7	1 383.9	+11.46
Long-term financial investments (non-current financial assets) at the end of the year. mln UAH	7 870.5	8 905.5	8 323.0	8 790.9	9 654.4	5 276.1	-32.96
Capital investments total. mln UAH	21 913.4	27 155.3	24 624.1	19 264.6	15 922.6	22 190.9	+1.27
Capital investments in tangible assets. mln UAH. incl.:	21 897.8	27 023.9	24 417.3	19 078.1	15 765.7	21 984.9	+0.40
– in the land. mln UAH	44.4	49.2	71.5	75.2	49.6	28.2	-36.49
– in available buildings and structures. mln UAH	176.9	181.5	292.6	300.1	138.9	331.6	+87.45
– in the construction and reconstruction of buildings. mln UAH	1 690.3	2 343.4	2 636.4	2 593.9	1927.9	2 523.0	+49.26
– in machinery and equipment. mln UAH	19 628.3	23 677.0	20 742.7	15 121.2	13 135.0	18 597.6	-5.25
Capital investments in intangible assets. mln UAH. incl.:	15.6	131.4	206.8	186.5	156.9	206.0	+1320.5
– in concessions. patents. licences. trademarks. mln UAH	0.4	9.2	1.4	0.9	0.4	0.6	+50.0
– in the purchase of software. mln UAH	5.3	9.8	12.7	8.4	5.4	14.8	+179.24
Volume of products sold. mln UAH	142 400.4	175 406.6	195 893.5	203 805.5	235 869.3	325 714.9	+128.73
Share in the total volume of products sold in the industry. %	36.64	40.10	38.82	37.91	40.13	36.55	

Source: research based on data (Economic statistics, 2023)

► **Support from the Food and Agriculture Organization of the United Nations (FAO).** As a result of the military operations, 1.5 million citizens need aid in resuming their activities in agriculture. The Food and Agricultural Organization of the United Nations (FAO) in 2023, to resume work in agriculture, plans to help restore activities and directs 205 million dollars for this. In 2022, 40,000 households in rural areas have already received this aid, and 100 million USD are still planned to be directed in 2023 to aid households (Landlord, 2022).

Implementation of the State Program “Affordable Loans 5-7-9%”

As of January 2023, the Entrepreneurship Development Fund has already concluded cooperation agreements with banks regarding the implementation of the State Program “Affordable Loans 5-7-9%”. (LandLord, 2023). Farmers can receive a loan for the

restoration of production facilities (destroyed or stolen partially or completely due to extreme operating conditions) in the amount of up to UAH 60 million (at 9%) for a period of up to five years; state subsidy; technical support loan from state donors; targeted credit.

In 2022, according to the State Program “5-7-9% Affordable Loans”, by Resolution of the Cabinet of Ministers of Ukraine No. 916 dated July 29, loans for seed companies (at 0%) in the amount of UAH 95.5 billion were extended to 12 months, and 24,722 billion UAH were received under state guarantees (80%). There are no funds to support the development of entrepreneurs in agriculture in the country's budget for 2023. However, the state can provide compensation, grants, or loans if necessary. For instance, Switzerland August 2022 allocated almost UAH 100 million for the affected 296 milk production farms in Kharkiv, Sumy, Chernihiv, and Kyiv regions (LandLord, 2023).

► **Implementation of the “e-Robota” grant program.** Within the framework of the “e-Robota” grant program, it is planned to create new jobs (632 permanent, 9,000 seasonal) in the development of greenhouses and gardens in 2023. This provides an opportunity for the operation of 80 new farms. 72 applications for gardens have already been approved (for UAH 327 million; 1,090.31 ha); for greenhouses – 8 applications (55 million UAH; 13.97 ha). UAH 383 million is the total amount of grants in two areas (Lupenko & Shpykuliak, 2019).

In 2022, grants in the amount of UAH 53.8 million have already been received by 33 farms and 6 business entities: LLC “Yahidnyi Dar”, LLC “Mi-Agro”, LLC “Svoi Vitaminy”, FE “Rosy Bukovyny”, FE “Gold”, PE “Lada Agro” (Ministry of Agrarian Policy..., 2022). The decision on the procedure for providing grants for the creation or development of viticulture, horticulture, and berry growing and the procedure for providing grants for the creation (development) of greenhouse farming is stipulated in the Resolution of the Cabinet of Ministers of Ukraine No. 39 of January 17, 2023 (On Amendments to the Procedure for Providing Microgrants for the Creation or Development of Own Business, Procedure for Providing Grants for the Creation or Development of Horticulture, Berry Growing and Viticulture and Procedure for Providing Grants for the Creation or Development of Greenhouses) (Cabinet of Ministers of..., 2023). The issue regarding the transfer of funds to recipients from the general fund of the state budget has been resolved.

In 2022, to provide additional financial support to family farms, the Ministry of Agrarian Policy and Food of Ukraine allocated UAH 1,420.44177 thousand to an off-budget account, paying its share as a single social contribution (Ministry of Agrarian Policy..., 2022). In addition, in 2023, within the framework of the USAID AGRI-Ukraine program, the Bayer company will invest more than 35 million USD in expanding the capacity of the seed processing enterprise (Agroportal, 2022).

► **Program for the development of agriculture in the Lviv region.** During 2022, 70 new farms were created in the Ivano-Frankivsk region, but the Comprehensive Agricultural Development Program, fully adapted to the conditions of martial law, was approved only in the territory of the Lviv region. This program covers and substantiates four areas of support and functioning of small and retail producers with funding of more than UAH 22 million. Today, the Lviv region is the leader in the number of family farms.

Subsidy payments for cows from the state budget for two years in a row allowed for slowing the pace of herd reduction. In 2022 alone, 16 new family farms were registered in the Lviv region. As of 01.01.2023, the total number of family farms in the region was 78. Of these, 48 family farms operated in the dairy cattle industry in 2020-2022. The dynamics of cattle population growth are quite positive (+798 heads or +33% compared to 2021). Farmers received a double subsidy per cow (5.3 thousand

UAH per head – from the State Agrarian Register; 2.5 thousand UAH – from the regional budget). 109 business entities (77 – legal entities; 32 – individuals-entrepreneurs) received support in the amount of UAH 7.5 million for keeping 3,000 cows.

Farms were also provided with grant support for projects to increase processing capacity under the “e-Robota” program in the amount of up to UAH 8 million (70% – grant funds; 30% – recipient funds) (Agroportal, 2022).

► **Indicators of family farming identification.** During the study, it was substantiated that the basis of the methodological principles of estimating the development of family farms are indicators that ensure the identification of parameters with the corresponding assessment of the most general and tangential indicators, namely the effectiveness of business processes; social development considering the specific features of the organizational and legal form; economic interactions, etc. The list of indicators of statistical reporting establishes the content of the corresponding methodical constructions. One of the indicators of identification of a family farm is the volume of land ownership. The second is the work of the owner and their family members.

It was also established that the value of the indicative indicator of the structure and size of land ownership or land use is one of the main institutional and formalization features of family farming. Rating identification of family farms as a legal form is the basis for implementing the priority of state support; development of forecast indicators; improvement of strategic guidelines for development; improvement of national agrarian policy (The concept of development..., 2021). State registration of family farms

54 family farms are registered in the Unified State Register of Legal Entities and Individuals-Entrepreneurs (the name contains family farm or family farming). 7 have an invalid certificate and 6 are registered in the Autonomous Republic of Crimea (FF “Tair”, FF “Guliai-Pole”, FF “Pryrichne”, FF “Khutor Luzhky”, FF “Khaziain”). 6 farms ceased their activities, but are still present in the Register.

The distribution of family farms registered as a legal entity by regions (except the Autonomous Republic of Crimea), by type of activity, is as follows:

- breeding of dairy cattle: FE “FF “Lyska”, FE “FF “Yunikasol”, Rivne region;
- breeding of other animals: FF “Ravlyk Bukovyny”, Chernivtsi region;
- mixed agriculture: FE “FF “Riverseil”, FE “FF “Koptar”, Zakarpattia region;
- cultivation of seed and stone fruits: FG “SFG “Agrofruit Zakarpattia”, Zakarpattia region;
- growing of berries, nuts, other fruit trees: FF “Medova yahoda”, Lviv region; FF “Fazenda SS”, FF “Krasvyi Sad”, Kyiv region; FE “FF “Dolyna zdorovia”, FE “FF “Tertychny”, Kherson region; FE “FF “Babychivske”, FF “Horikhovyi Rai”, Poltava region; FE “M and M Family Farm”, FE “FF “Sribna Zemlia”, FE “FF “Arnika”, Zakarpattia region;

► cultivation of grain crops, leguminous crops and oilseeds: FF “Vidrodzhennia 2019”, Khmelnytskyi region; FE “FF “Pryshchepa”, Chernihiv region; FE “Pronchuk Agro”, Rivne region; FE “FF “Kolos”, Zaporizhzhia region; FE FF “Raf-agro”, Mykolaiv region; FF “Berezka”, Zhytomyr region; FE “FF “Zakagrotrans”, Zakarpattia region; FE “Simeina Ferma”, Vinnytsia region; FF “Kovalovy”, Donetsk region; FF “Zelena Dibrova”, FF “Dibrova”, Sumy region; FE “FF “Mitselia”, FF “Soliana”, FF “Nerta”, FF “Lesia”, FF “Agro-Ivanys”, FF “Agrikole”, Poltava region (Unified State Register..., 2022).

► **Animal husbandry and financial support for farms.** A considerable part of farms does not have a livestock sub-sector, or livestock comprises a small share in the structure of agricultural production. For instance, FF “Kub”, FF “Medova Yagoda” – Lviv region; FF “Zakagrotrans” – Transcarpathian region (Agroportal, 2022; Nomis, 2022); FE “M and M Family farm”, FE “Sribna Zemlia”, FE “Arnika”, FE “Agrofruit Zakarpattia”, FE “Family farming “Koptar”, FE “Riverseil” – Zakarpattia region (Unified State Register..., 2022; You Control, 2022).

In 2022, over 3,100 producers of agricultural products in the Volyn region received special budgetary financial support (31.8 million UAH – subsidy for keeping cattle (cows) in the amount of 5,300 UAH per cow for 845 owners; 57.7 million UAH – subsidy per unit of cultivated agricultural land (1 ha) in the amount of 3,100 UAH per 1 ha for 2,282 owners) (Agroportal, 2022).

► **Implementation of the “Family Dairy Farms” project.** The “Family Dairy Farms” project is being actively implemented in the territory of four regions (Rivne, Volyn, Khmelnytskyi, Ternopil). The leaders in terms of the number of active family dairy farms are the Khmelnytskyi region (37 farms), Volyn region (26 farms), and Rivne region (23 farms). Dairy farms operate in the Poltava region (9), Mykolaiv region (6), and Sumy region (4). In 2021 alone, the number of new participants increased by 92 farms (Family dairy farms, 2023). In extreme operating conditions in 2022, the number of family dairy farms was 172 (+22% increase in cattle; +20 farms in the Poltava, Volyn, and Khmelnytskyi regions). Therewith, the average milk yield for 2022 in the network of farms of the Family Dairy Farms project amounted to 4,800 litres.

Furthermore, compost production was introduced on farms and the network of cheese factories was expanded (The number of..., 2020; Agroportal, 2022). Implementation of the “Family Dairy Farms” project provides opportunities to create family dairy

farms and support them (Poltava region); help with transporting cows and equipment (Sumy region); provide seeds for sowing corn (Vinnytsia region) or compound feed (Ternopil region) (Kurkul, 2022).

To revitalize dairy farming, the implementation of the “Family Dairy Farms” project for particular 167 family farms is controlled by UkrMilkInvest LLC. It offers financial support for the construction of premises, the purchase of livestock, and the purchase of equipment; provides consulting and veterinary services. Sources of financing for the activities of family dairy farms are bank loans, grants from foreign governments, and funds from private investors. FF “Molochne Dyvo” (Rachyn village, Lutsk district, Volyn region) keeps 74 heads of cattle; FF “Yunikasol” (Rivne region) – 29 heads of cattle (own craft cheese factory sells about 300-400 kg of cheeses every month); “Molochnyi Shliakh” (Rivne region) – 21 heads of cattle with calves; “Papyki” (Derno village) – 21 heads of cattle; “Markivchanka” – 40 heads of cattle (ITC, 2022).

► **Areas of state support for family farming.** To increase the potential of family farming, state support is vital. The areas of state support include starting one's own business, ensuring the protection of property rights, employment, and the formation of the middle class in the countryside (Order of Cabinet..., 2023).

The state should also contribute to the socio-economic development of the village, national identity, and reproductive management in the countryside. It is important to activate the mechanism of stimulating “green” production and the production of niche and sparsely distributed products, fiscal stimulation of the general entrepreneurial activity of the population (The UN announces..., 2019; LandLord, 2022).

► **Development of rural households and private household plots.** The mechanism of functioning of farmers and private household plots (PHP) not only preserves but also develops the potential of supply chains and the volumes of local market niches, increases the system of ensuring the adaptation of the agrarian structure of Ukraine to the EU (National Academy..., 2022). The development of private household plots contributes to the formation and stabilization of rural society (Concept of development..., 2021; Expert assessment of..., 2023).

In 2020, there were 3,954.8 thousand PHPs in Ukraine, using 6,125.7 thousand ha of land, producing a share of gross agricultural products (36.6%). The largest share in the production of certain types of products is the production of potatoes (98.1%), vegetables (84.6%), fruit (83.2%), milk (70.2%), livestock breeding (64.9%), poultry farming (45.3%) (Table 3).

Table 3. General characteristics of rural households and private household plots

Indicators	2017	2018	2019	2020	2021	deviation 2021 in % to 2016
Number of households in rural areas. thous. units	4 900.1	4 873.6	4 844.2	4 782.1	4 734.1	-3.39
Number of PHPs. thous. units	4 031.7	3 996.5	3 975.1	3 954.8	3 921.5	-2.73
Land area owned by PHPs. thous. ha. incl.:	6 175.6	6 132.2	6 133.6	6 125.7	6 120.0	-0.90

Table 3, Continued

Indicators	2017	2018	2019	2020	2021	deviation 2021 in % to 2016
for construction and maintenance of residential buildings, outbuildings and structures, thous. ha	793.3	791.0	788.3	787.0	777.1	-2.04
for private household farming, thous. ha	2 551.3	2 513.4	2 512.6	2 517.7	2 544.2	-0.28
for commercial agricultural production, thous. ha, of which:	2 799.3	2 777.1	2 781.8	2 772.6	2 735.3	-2.29
leased, thous. ha	338.5	345.0	348.2	350.9	367.1	+8.45
Households with land area, %:						
under 0.50 ha	51.6	51.3	51.6	52.7	51.3	
0.51-1.00 ha	26.4	28.0	27.6	27.0	26.9	
over 1.01 ha	22.0	20.7	20.8	20.3	21.8	
The average area of land used by one household that owns a plot of land, ha	2 868	2 921	2 858	2 822	2 667	-7.01
The average size of the land area of the household, ha	1.23	1.20	1.19	1.18	1.24	+0.81
The average land area of the PHP, ha	1 532	1 534	1 543	1 549	1 561	+0.03
Gross agricultural production, billion UAH	279 393	314 904	311 302	326 604	437 539	+56.60
Produced by the household per person, UAH	5 347	5 519	5 500	5 184	5 521	+3.25
The share of households in gross agricultural production, %	39.5	37.2	36.9	36.6	32.0	
The share in the production of certain types of products, % of the total volume, incl.:						
potatoes	97.8	98.1	98.2	98.1	97.7	
vegetable crops	86.1	85.6	85.3	84.6	85.9	
fruit and berry crops	80.9	78.4	83.4	83.2	79.2	
milk	74.9	72.6	71.8	70.2	68.2	
raising livestock	37.0	34.9	31.9	31.2	29.4	
Industrial output index, % to the previous year	95.8	101.7	99.1	93.6	105.6	
crop production	95.5	103.3	100.2	92.8	111.4	
livestock products	96.3	98.1	96.7	95.6	92.4	

Source: research based on data (Economic statistics, 2023)

The negative trend is a decrease in livestock production (about 4% per year). There is a physical reduction of agricultural enterprises in the war zone. A potential loss of up to 30% of the animal population is expected.

► **The principal factor of economic development in the period of post-war reconstruction.** During the post-war reconstruction period, the main factor in the development of the economy will be the unification of villagers into cooperatives and simplified companies. In their activities, the villagers understood that their existence can be ensured only based on mutual support. The programs already implemented in Ukraine by the FAO (Food and Agriculture Organization) and other donors implement a farmer-centric model in agriculture. The trend for self-sufficiency, the practice of gardening, homesteads for personal needs is being updated (Economic foresight, 2022).

► **Land relations and development of entrepreneurship.** Multi-industry production is a priority for medium and large economic structures, and micro- and small ones, which include family farms with a size of 2-20 hectares, are more effective

when focusing on an optimally selected product niche. Reforming land relations is inseparable from the development of entrepreneurship, especially small and medium-sized business structures. During the war, 10,341 agreements were concluded, covering an area of 18,153 ha. In terms of the number of transactions and the area of land for which transactions were registered, the most active land market during the war was as follows: Vinnytsia region (2.2 thous. ha), Dnipro region (1.3 thous. ha), Poltava region (2.2 thous. ha), Kirovohrad region (2.4 thous. ha), Khmelnytskyi region (1.8 thous. ha). In the last week of July 2022, 1,317 transactions were concluded within the land market covering an area of 2,256 ha (Agroportal, 2022).

In terms of efficiency and creativity, it is necessary to single out niches of exclusive products, or innovative ones, which, according to the final balance of costs and benefits, can be considered high-margin, etc. A small farm cannot rely on the effect of scale. It is expedient for such an enterprise to choose the optimal specialization, market segment, and produce high-quality food products to support the demand for it from a certain category of consumers.

► **Plans to implement the concept of stimulating the development of entrepreneurship in rural areas until 2030.**

In implementing the Concept of stimulating the development of entrepreneurship in rural areas until 2030 (The concept of stimulating the development..., 2021), it is planned to increase the number of cooperatives (based on farms or PHPs) by 40-50 units and the employment of the rural population; advisers and expert advisers up to 70 people, small enterprises in rural areas at the level of 1.5-2 thous. units. The changes also apply to facilities for primary processing of products; the share of production of farms in the total amount of gross agricultural products up to 15% and the income of local budgets; coverage of advisory services to 90% of commodity producers and the rural population (Decree of the President..., 2019).

► **Study of the specific features of the processes of functioning and development of farms.**

The principal role in the preservation and development of local markets and food supply chains is played by farmers and PHPs. Farmers and PHPs function for the existence of the producer itself, and not just for profit and rent. The development of farms and private farms, as well as their cooperatives, will contribute to ensuring the adaptation of the agricultural structure of Ukraine to the EU (National Academy of Sciences..., 2022; The twilight of..., 2022). The study of the specific features of the functioning and development of family farms in extreme conditions is focused on the essence of concepts, factors, assessment methods, management tools, the influence of external and internal factors, and allows formulating key aspects of using their potential in the field of ensuring food security. These questions have been considered in various interpretations by some economists (Ukraine 2022..., 2022; Expert assessment..., 2023).

M. Malik and V. Mamchur (2020) argued that "family farming" means an organization of agricultural production managed by a family; depends on family work. A family farm can be organized in the form of an individual or legal entity. It was also established that family farms combine two purposes of functioning (consumer (increasing the well-being of all household members) and production (maximizing income)). Emphasis is placed on models of family corporation, labour farming and farming based on the use of hired labour. It was noted that the features of a family farm are as follows: norms of behaviour (social orientation, cultural heritage, predictability of actions of household members, innovativeness); duality of development goals (income maximization, land management); a combination of cultural, economic, technological conditions of functioning and multi-vector processes.

O.H. Shpykuliak and O.V. Alekseeva (2021) conducted empirical assessments of trends in the development of farms. The results confirmed the special socio-economic importance of farms in ensuring labour productivity, rural employment, efficiency of family farms; features of personification of labour results from employment in their own economy and labour motivation. The authors of this paper

support the position that the development of family farming in rural areas is a priority model for improving the well-being of the population (Law of Ukraine 755-IV..., 2015).

The implementation of the marketing strategy of small businesses is the most essential element of the management system for the survival of the population and providing citizens with high-quality food. This is also confirmed by the results of modelling the parameters of the stability of the anti-crisis development potential of agricultural business entities. The analysis of the impact of the armed conflict on the development of small business entities in agriculture allows establishing the correlation between the change in the sale price of products and financial costs for defence needs and substantiating the trends of changes in the average sale prices of agricultural products (Semenenko *et al.*, 2021).

The development of cooperation is one of the areas of restoring farm production after the war and increasing employment and well-being of the rural population. The processes of survival and cooperation of small business entities, increasing the complexity of management from the standpoint of Agile Business Process Management (Agile BPM) belong to the processes of the mechanism of realization of the socio-ecological benefits of functioning, expansion of competitive advantages, prompt response to changes in the market and in the business environment (Lopes & Gomes, 2022; Bitkowska *et al.*, 2022).

The authors of this study agree with the opinion of V. Rudenko *et al.* (2022) and S. Kravchenko *et al.* (2022b), who determined that the imperfection of the fiscal mechanism is reflected in the manifestations of the investment activity of households. It is advisable to optimize the taxation of small-scale entrepreneurs and to create innovative integrated structures by involving the employees of the advisory services in the accounting and analytical work of small-scale agricultural producers. This should also be reflected in the priority areas of development of small entrepreneurs in agriculture and in the mechanism of increasing the investment potential of Ukraine.

Small entrepreneurs in agriculture are quite sensitive to extreme conditions and transformational shocks. The model of behaviour and survival in the functioning environment chosen by a small entrepreneur entity is critical. The problem of survival for small entrepreneurs is reflected primarily in the loss of their market niche capacity. Therefore, the management of the business entity should be ready for operational appropriate actions, namely for developing and applying strategies to reflect the effects of the consequences of wars by the entrepreneur and its structures (Kravchenko *et al.*, 2022a).

Some researchers insist that the primary tasks that will arise after the war will be a review of the issue of granting benefits for the development of livestock, as well as repurposing the program of available loans to stimulate the technical re-equipment of production and the development of enterprises for the production of agricultural products in farms

and small farms (in the field of animal husbandry). An essential task will be to prepare entrepreneurs producing the animal husbandry products for adaptation to the sanitary standards of the European Union and the standards of technical regulation (Ukrainian Institute of the Future..., 2022).

The study of the specific features of the functioning of family farms allows concluding on their further development and defining conceptual approaches to the proper performance of their functions to ensure food security, reduce poverty, create more jobs and improve the environment. Considering the state's capabilities under martial law, the focus should be on supporting public goods – ensuring the spread of financial literacy and creating prerequisites for developing investment proposals to increase the potential of the agricultural sector. Added support for small-scale farming is needed, especially for the development of livestock industries and niche organic crops. It is also important to promote the transition of small farms to “green” growth and the transition to climate-neutral technologies.

► Conclusions

The conducted empirical assessments of trends in the development of farms confirmed their special socio-economic importance as quickly responding to changes in the business environment under martial law.

According to the “Decade of Family Farming 2019-2028” announced by the UN, 54 family-type farms were registered in Ukraine at the beginning of 2023. The purpose of the strategy for the development of family farms in the post-war period is the formation of an entrepreneurial environment capable of ensuring the growth of the incomes of the rural population.

The study results indicate that the activity of farms in wartime conditions ensures the performance of their functions. Family farms are more adapted to wartime activities due to their mobile management system and compact production. The development of rural social capital is becoming a priority. The prospects for the institution of self-sufficiency and the provision of food support to other citizens are increasing.

The successful development of farming is based on activities that operate in individual regions. Thus,

► References

- [1] Agroportal. (n.d.). Retrieved from <https://www.agroportal.ua>.
- [2] Bitkowska, A., Dziembek, D., & Gzik, T. (2022). Towards cloud agile business process management. *Communications of the IBIMA*, 2, article number 821632. doi: 10.5171/2022.821632.
- [3] Decree of the President of Ukraine No. 722/2019 “On Sustainable Development Goals of Ukraine for the Period Until 2030”. (2019, September). Retrieved from <https://zakon.rada.gov.ua/laws/show/722/2019#Text>.
- [4] Economic Statistics. (n.d.). Retrieved from https://ukrstat.gov.ua/operativ/menu/menu_u/cg.htm.
- [5] Expert assessment of draft laws No. 3131, 3131-1, 3131-2 on the land rental market. (2023). Retrieved from <https://www.economics.org.ua/index.php/blog/349-rinok-orendi-zemli>.
- [6] Gafarov, N., Ibrahimov, E., & Huseynov, M. (2022). Analysis the capacity of grain export potential in Ukraine, possible reasons for the decrease and development trends. *Scientific Horizons*, 12(25), 102-112. doi: 10.48077/scihor.25(12).2022.102-112.
- [7] Ierokhin, S.F., Braslavets, O.Yu., & Shupik, Ye.O. (2022). Small business in the context of the principle of subsidiarity: On the issue of distribution of financial powers and fiscal pressure. *Actual Problems of Economics*, 2-3, 80-92. doi: 10.32752/1993-6788-2022-1-248-249-80-92.
- [8] ITC. (n.d.). Retrieved from <https://www.unicasol.smfua.com>.
- [9] Ivanyuk, T.K., Savka, M.V., & Balanyuk, I.F. (2020). Methodology of study of land relations of agricultural enterprises and farms. *European Journal of Economics and Management*, 6(2), 36-42. doi: 10.46340/eujem.2020.6.2.4.

in the Lviv region, a comprehensive program for the development of agriculture, adapted to wartime conditions, was developed and approved, which makes provision for support with appropriate financing of small (including family) producers. This provided a positive trend in the growth of the cattle population in 2022 by 33% compared to 2021.

It was substantiated that there is a need to fulfil the purpose of accelerated development of family farms in the most promising areas that will be capable of providing a substantial increase in added value (processing of agricultural raw materials, innovative renewal of production, and infrastructure). In further studies, there is a need to clarify the strategic areas and principles of small entrepreneurship development, accelerate the post-war development of the Ukrainian economy and activate the involvement of local self-government bodies in supporting the family farms. For this, it is necessary to develop state and regional programs for the development of family farms for the period until 2030 according to the UN action plan “Decade of family farms 2019-2028” and to determine the priority areas of their development in Ukraine.

The reasons that hold back the development of family farming are as follows: the absence of a coherent and consistent policy aimed at the comprehensive development of rural areas, which is based on the needs of the territorial communities of villages and settlements, and on the support of family farms that own and use land plots with a total area of no more than 100 ha, and agricultural cooperatives; low level of technical and technological support; insufficient awareness of the population about the possibilities and advantages of creating family farms.

In the further development of family farms, a crucial factor is state support for starting one's own business, protecting property rights, and employment, spreading financial literacy, and increasing export potential.

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► Conflict of Interest

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- [10] Junaidi, J., Amril, A., & Riski, H. (2022). Economic coping strategies and food security in poor rural households. *Agricultural and Resource Economics*, 8(1), 30-51. doi: 10.51599/are.2022.08.01.02.
- [11] Kalnyi, S. (2022). Planning of farm activities in the context of rural development. *Uzhhorod National University Herald*, 45, 26-34. doi: 10.32782/2413-9971/2022-45-5.
- [12] Kravchenko, S., Kovalenko, V., Lyutyi, I., & Zatonatska, T. (2022a). Adaptation of the mechanism of functioning of agricultural business entities to competitive conditions. In *Theoretical Foundations in Economics and Management*. USA, Boston: Primedia eLaunch.
- [13] Kravchenko, S., Malik, M., & Zatonatska, T. (2022b). Modeling of the processes of adaptation of the economic mechanism of the functioning of agricultural business entities to the market. USA, Boston: Primedia eLaunch.
- [14] Law of Ukraine 755-IV "On Unified State Register of Legal Entities, Individual Entrepreneurs and Civil Formations". (2015, September). Retrieved from <https://zakon.rada.gov.ua/laws/show/755-15/ed20151209#Text>.
- [15] Lopes, J.M., & Gomes, S.S. (2022). Innovative and sustainable business strategies: The case of Portuguese SMEs. *IBIMA Business Review*, 2, article number 714613. doi: 10.5171/2022.714613.
- [16] Lupenko, Yu., & Shpykuliak, O. (2019). *Organizational and economic support for the development of family farms*. Kyiv: NNTs «IAE».
- [17] Lupenko, Yu.O., Malik, M.Y., Shpykulyak, O.G., Mamchur, V.A., & Korinets, R.Ya. (2021). *Concept of development of family farms for the period until 2030*. Kyiv: NSC "IAE".
- [18] Malik, M., & Mamchur, V. (2020). Socio-economic orientation of family farms in entrepreneurial activity. *Ekonomika APK*, (27)9, 30-41. doi: 10.32317/2221-1055.202009030.
- [19] Ministry of Agrarian Policy and Food of Ukraine. (2022). Retrieved from <https://minagro.gov.ua/napryamki/fermerstvo-ikooperaciya/fermerstvo-ta-kooperaciya>.
- [20] Molnar, H.T. (2021). Providing internal sources of development of the investment potential of personal peasant farms. *Investments: Practice and Development*, 15, 70-76. doi: 10.32702/2306-6814.2021.15.70.
- [21] National Academy of Sciences of Ukraine. (2022). Retrieved from <https://www.nas.gov.ua/EN/Messages/Pages/View.aspx?MessageID=9288/>.
- [22] Nemish, D.V., & Humenyuk, M.M. (2022). Fundamentals of the functioning of a small agricultural enterprise in the conditions of European integration. *Bulletin of Agricultural Science*, 8(833), 79-88. doi: 10.31073/agrovisnyk202208-10.
- [23] Nomis. (2022). Retrieved from <https://www.nomis.com.ua/ru/43502655-simeine-fermerske-gospodarstvomedovayagodav>.
- [24] Odnorog, M., Kraus, N., & Kraus, K. (2019). The features of entrepreneurial interactions in the agricultural sector in terms of institutional transformations. *Baltic Journal of Economic Studies*, 5(4), 171-181. doi: 10.30525/22560742/2019-5-4-171-181.
- [25] Order of Cabinet of Ministers of Ukraine No. 39-p "On Ensuring Management in the System of Internal Affairs Bodies of Ukraine". (2023, January). Retrieved from <https://zakon.rada.gov.ua/laws/show/39-2023-%D1%80#Text>.
- [26] Order of the Cabinet of Ministers of Ukraine "On Concept of Stimulating the Development of Entrepreneurship in Rural Areas Until 2030". (2021, September). Retrieved from <https://minagro.gov.ua/npa/pro-shvalennyakonceptciyi-stimulyvannya-rozvitku-pidpriyemnictva-na-silskih-teritoriyah-do-2030-roku>.
- [27] Rudenko, V., Pohrishchuk, H., Dobizha, N., & Moskvichova, O. (2022). The role of fiscal mechanism in regulation of households' investment activity in EU countries and in Ukraine. *Scientific Horizons*, 25(5), 86-100. doi: 10.48077/scihor.25(5).2022.86-100.
- [28] Sanikidze, H. (2021). Factors hindering the development of agricultural cooperatives in Georgia. *Economics. Ecology. Socium*, 5(3), 29-38. doi: 10.31520/2616-7107/2021.5.3-4.
- [29] Semenenko, O., Minochkin, A., Vasylenko, S., Klepikov, V., & Pravdyvets, O. (2021). Assessment of the impact of the armed conflict in Ukraine on the development of the agricultural sector and price setting. *Scientific Horizons*, 24(7), 68-80. doi: 10.0.187.205/scihor.24(7).2021.68-80.
- [30] Shpykuliak, O.H., & Alekseeva, O.V. (2021). Development of farms in the organizational and economic provision of employment. *Ekonomika APK*, 4, 95-107. doi: 10.32317/2221-1055.202104095.
- [31] Shyian, D., Herasymenko, Yu., Ulianenko, N., Velieva, V., & Kotelnikova, I. (2021). Household income as a factor forming potential demand on the market of organic products. *Agricultural and Resource Economics*, 7(4), 100-114. doi: 10.51599/are.2021.07.04.06.
- [32] State Property Fund of Ukraine. (n.d.). Retrieved from <https://www.spfu.gov.ua/ua/documents/1332.html>.
- [33] Strapchuk, S., & Mykolenko, O. (2022). Algorithm for selecting alternative strategies for sustainable intensification of agricultural enterprises. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 9(2), 9-17. doi: 10.52566/msu-econ.9(2).2022.9-17.
- [34] The number of family dairy farms will increase in Ukraine - opinion. (2020). Retrieved from <https://kurkul.com/news/19722-v-ukrayini-zbilshitsya-kilkist-simeynih-molochnih-ferm--dumka>.
- [35] The twilight of agricultural holdings: how the war will change the agriculture of Ukraine. (2022). Retrieved from <https://www.mind.ua/publications/20245288-sutinki-agroholdingiv-yak-vijna-zminit-silske-gospodarstvo-ukrayini>.
- [36] The UN announces the start of the Decade of Family Farming. (2019). Retrieved from <https://www.landlord.ua/news/oon-oholoshuie-pochatok-desiatylyttia-simeinykh-fermerskykh-hospodarstv/>.
- [37] Ukraine 2022: How not to lose your chance to become a strong state. (2022). Retrieved from <https://www.uifuture.org/publications/ukrayina-2022-yak-ne-vtratyty-svij-shans-staty-sylnoyu-derzhavoyu>.

- [38] Yatsiv, I.B., & Solovei, Yu.I. (2019). *Participation of small agricultural producers in integrated structures*. Lviv: NVK.
- [39] You Control. (n.d.). Retrieved from <https://www.youcontrol.com.ua/ru/catalog/>.

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► **Анотація.** Фермерські господарства є невід'ємним елементом територіальних утворень і місцевої культури: застосовують різноманітні сільськогосподарські системи, сприяючи збалансованості раціону харчування, зберігають навколишнє середовище. В умовах воєнного часу фермерські господарства мають унікальний потенціал для формування продуктивних і стійких продовольчих систем. Всі ці особливості свідчать, що дослідження системи розвитку фермерських господарств є актуальним і має як теоретичне, так і практичне значення. Мета статті – обґрунтувати теоретико-методологічні засади, соціально-економічні та правові проблеми діяльності фермерських господарств в умовах воєнного стану. За методологічну основу дослідження слугували положення системного аналізу та економічної теорії. Використано монографічний, нормативний, графічний, абстрактно-логічні методи та підходи узагальнення результатів. Визначено що умови перебування на єдиному податку 4 групи є найбільш вигідними для фермерських господарств, так як податок фіксований і залежить лише від обсягів земельних ділянок. Встановлено, що особисті селянські господарства мають можливість реалізувати свою діяльність у формі підприємництва для фізичних осіб–підприємців, які організували СФГ. Дана характеристика окремих сімейних фермерських господарств Львівської, Закарпатської та Чернігівської областей. Встановлено, що під час воєнного стану держава виділяє кошти за спец дотаціями та субсидіями для підтримки розвитку фермерських господарств. Виявлено, що найбільш адаптованими до кризових умов, пов'язаними з воєнними діями, є фермерські і особисті селянські господарства. Результати дослідження можуть бути враховані при розробленні регіональних програм розвитку суб'єктів аграрного підприємництва; розробці нормативно-правових актів для формування і розвитку кооперації і інтеграції в аграрній сфері економіки

► **Ключові слова:** суб'єкт підприємницької діяльності; адаптація до умов воєнного стану; фермерське господарство; особисте селянське господарство; сільськогосподарський кооператив; інтеграційно-кооперативні структури; інтеграційні об'єднання