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Strategic perspectives of rural households development in Ukraine**Dmytryk O.** *Vinnitsa national agrarian university*

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The article studies the peculiarities of functioning of rural households, the substantiation of strategic scenarios for their development and the development of an effective mechanism for strengthening their role in the formation of agri-food resources of Ukraine.

Taking into account the current state of the agricultural sector and real conditions of rural households existence, several alternative ways of their development are defined: individual (independent) development; integration of rural households with agricultural and processing enterprises; cooperation with other rural households and with small businesses.

The analysis of the structure of agricultural production in terms of rural households that can be consumer oriented, consumer – production oriented and production oriented allows us to conclude that a long-term development of rural households will lead to a change in their commodity proposal. The results of the design analysis of the average growth rates of all three resource components showed: the average annual growth rate of labour remuneration - 24.3%; average annual growth rate of financial assistance - 21.5%; average annual growth rate of rural household income - 14.6%; the average annual growth rate of total revenues (resources) - 18.7%.

Having used the statistical package "STATGRAPHICS", we analyzed the tendencies of decrease of incomes share of rural households from own labor and capital; as well as growth of incomes from hired labor. Having used the ARIMA model, we made a forecast until 2025, and found that the share of population incomes from rural households will decrease to 20.2%. However, the decrease in income from own labor and capital should be offset by an increase in income from remuneration of labor received in the real sector of the economy.

In addition, the share of gross output of households in the total gross output of agriculture is calculated. The Brown model (exponential smoothing model) with the parameter $\alpha = 0.3639$ was used for the forecast. According to the results of calculations, it can be concluded that in the future the share of gross agricultural output will decrease and may reach 35.7% by 2025.

Today it is also obvious that production oriented rural household, in conditions of increase of marketability level and effective mechanisms for the sale of manufactured products, can be the base for the development of entrepreneurship in agricultural production. This can be created through the organization of a system of purchasing manufactured products from the population, or through the organization of a system of consumer cooperation. Based on this, we believe that the development of land mortgage lending is important to meet financial resources needs of small agricultural producers in Ukraine, to achieve maximum economic effect from the realization of land potential, and as a result, to reduce risks in agricultural production. The mechanism for solving this problem, to our opinion, is the creation of mortgage funds of entity at the state level or at the level of united territorial communities.

Key words: rural household, incomes of rural households, family farms, rural territories, mortgage lending, cooperation.

Problem identification and analysis of recent researches. The practice of highly developed countries of the world shows that technological and social progress in the agriculture is possible only if a two-sector economy develops, where, along with large, small production operates and the interests of all agricultural producers are equally respected.

However, despite higher economic and social importance of rural households in modern conditions, their further development is constrained by a number of factors, the most significant of which are: liquidation and deterioration of a significant part of agricultural enterprises that previously provided significant support to private farms in form of fodder, young cattle, equipment; high prices for energy, agricultural machinery, small mechanization facilities, mineral fertilizers, concentrated feeds; low purchasing power of the population; lack of a branched network of specialized organizations for the purchase of agricultural products from the population; low purchase price for agricultural produced by households; untimely payments for sold products. Therefore, studies that would consider strategic prospects for the development of rural households in Ukraine are relevant today.

The following economists have made a significant contribution to the study of the socio-economic nature of rural households, their role and various aspects of functioning: O.M. Varchenko [1], I.M. Demchak [2], V.M. Prosov [3], I.V. Swinous [4], O.V. Fedik [5], O.M. Shpichak [6], M.G. Shulsky [7] and others. However, despite a large number of publications devoted to this problem, there is a need for in-depth study of these issues.

Purpose of the research. To study the peculiarities of rural households functioning, to justify the strategic scenarios of their development and to develop a viable mechanism for the enhancing of their role in the formation of agro-food resources of Ukraine.

Materials and methods of the research. The indices of Ukrainian households' cumulative resources structure of annual discretisation during 2000 – 2018 (17 indices in total) were used for the development for the forecast of rural households development. The first and most important source of income is hired labor, the income is obtained through the work of one member of rural household and the capital of enterprise owner. The second source is financial assistance: pensions, social transfers, scholarships and other financial aids, etc., which come from outside. The third source is determined by rural household (land, buildings, means of production). Some products are sold on

the market (not necessarily food market), others are consumed.

Results of research and discussion. The research was based on empirical studies by domestic scientists, that justified the methodological basis for the functioning of rural households in the agricultural sector of Ukraine, based on the "sustainability" strategy for the majority of rural households.

Rural household is not only an economic concept that characterizes one of the forms of organization of agricultural production, but it is also "people's philosophy, their way of life, the way of existence in inseparable connection with the wildlife world" [8]. However, the majority of agricultural producers belonging to households, their activities are guided by the Law of Ukraine "On Rural Household", which considers rural households as a form of non-profit activity of production and processing of agricultural products, which are conducted by a person or /and members of his household which cohabit with him and (or) run a household with him in order to meet personal needs on the land which is provided for running a rural household [9].

Thus, rural household can be considered as a form of organization of agriculture, which has the right to exist in the future, but as long as to implement a set of measures, in particular:

- organization of purchases of agricultural products with the possibility for farmers to make contracts for future harvests (products) with guaranteed payment at agreed prices and partial lending;
- organization of maintenance of a part of field works on land plots for rural households;
- meeting other needs of rural households by supplying young stock farm animals;
- availability of bank loans and financial services;
- organization of information and consulting services for opportune information on market conditions;
- creation of decent living conditions in the countryside, development of the social sphere, transport infrastructure.

An important issue remains the substantiation of perspective scenarios for the development of rural households and the development of an effective mechanism for strengthening their role in the formation of agrofood resources of the country. It is obvious that taking into account the current state of the agricultural sector of the economy and the real conditions of rural households, there are several alternative courses of development: individual (independent) development; integration of rural households into agricultural and processing

enterprises; cooperation with other rural households and other small businesses.

We share the view of scientists that the least economically acceptable for rural households is an independent way of its development, due to the small size of agricultural production and the weakness of the physical facilities [7]. We believe that this option can become rational in the long-term development of rural households only if rural households are provided with sustainable economic support at state, regional, UTC level.

Analysis of the structure of agricultural production in terms of consumer, consumer-commodity and commodity line of rural household direction allows us to conclude that the long-term development of rural households will lead to a change in their product proposal.

The results of the analysis of the average growth rates of all three resource components showed: the average annual growth rate of income from wages is 24.3%; average annual growth rate of financial

assistance is 21.5%; average annual growth rate of rural household income is 14.6%; the average annual growth rate of total revenues (resources) is 18.7%. But according to the NBU, the average inflation rate in the range under the study is 13.3%, it is possible to calculate the real income of households, which grew due to higher wages and other incomes. All this led to a significant decrease in the share of income from households in the structure of total household resources (Fig. 1).

Using the statistical package "STATGRAPHICS", we analyze the trends of decreasing of rural households income share from their labor and capital and increasing income from hired labor. Consider the declining trend in the share of income from own labor and capital. The highest parameters of adequacy of the studied process were achieved using the model of average autoregressive integration, so called ARIMA. The model is defined by three parameters. The model adequacy parameters are shown in table 1.

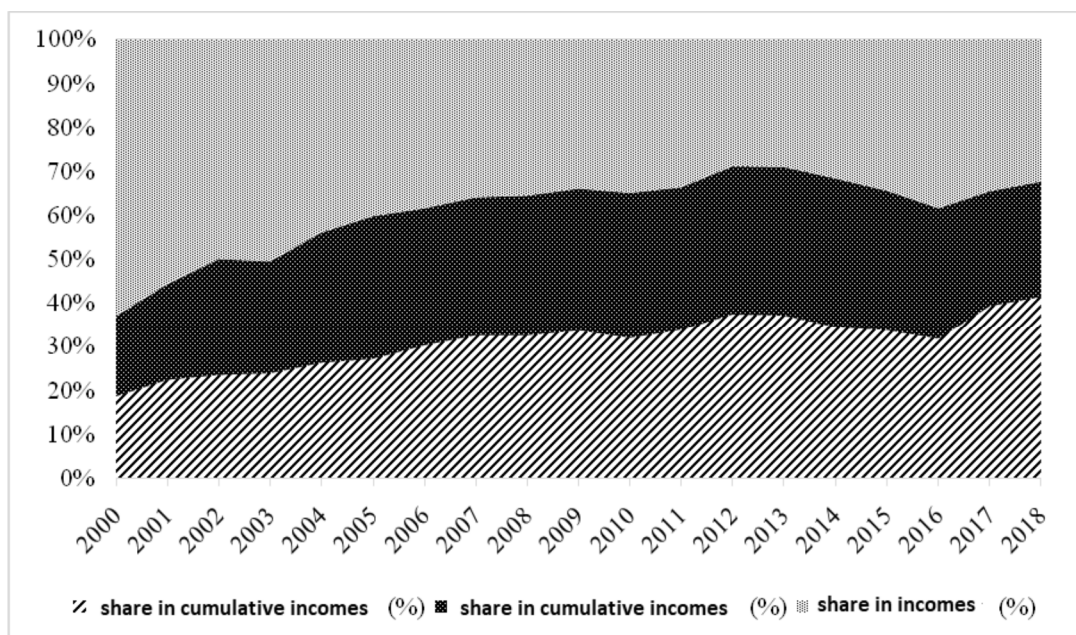


Fig. 1. The ratio of the main sources of income of rural households in Ukraine, %.

Source: compiled and calculated according to the State Statistics Service of Ukraine [10].

Table 1 – Parameters of the adequacy of the anticipated model for the share of income from rural household and capital (PKL)

Characteristic	Value	Standard error	T-statistics	R-statistics
AR(1)	0,285	0,909	2,019	0,018
MA(1)	-0,066	0,899	-2,004	0,019
MA(2)	0,103	0,040	2,020	0,009
Mean	-1,768	1,092	-1,818	0,028
Constant	-1,265			

Source: author's calculations.

According to these parameters, the ARIMA model adequately reflects the studied process, which allows to make a forecast for the next seven years (Table 2 and Fig. 2). According to the calculations, the share of revenues from OSG will decrease to 20.2% by 2025.

Extrapolation of the obtained data allows to estimate the time interval when income from own labor and capital will not be significant in the income of rural households (less than 10%). As a result of calculations, it is realized that it will be

approximately in 2031. However, the decrease of income from own labor and capital should be offset by an increase of income from wages received in the real sector of the economics.

Today, a significant share of gross agricultural output is the output of households. Therefore, it is of considerable interest to forecast the dynamics of this share for the next five years. We used the annual data on gross household income and total gross agricultural output for 1995–2018 for the forecast (Table 3).

Table 2 – Anticipated calculations of the share of income from rural household and capital (PKL) in Ukraine for 2020–2025, %

Period	Anticipated values	The lower limit of 95% confidence interval	The upper limit of 95% confidence interval
2020	29,0	22,1	35,9
2021	27,2	18,4	36,0
2022	25,5	15,1	35,8
2023	23,7	11,9	35,5
2024	21,9	8,9	34,9
2025	20,2	6,0	34,3

Source: author's calculations.

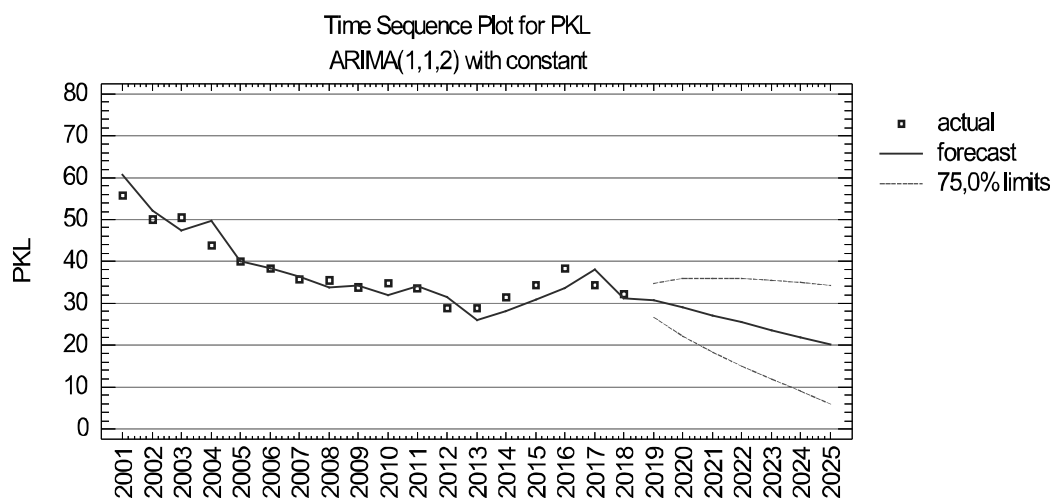


Fig. 2. Forecast of the share of income from own labor and capital for rural households in Ukraine for 2019-2025.

Source: constructed by the author.

Table 3 – Forecast calculations of the share of household income from running a rural household (GPH), %.

Period	Predictive values	The lower limit of 95% confidence interval	The upper limit of 95% confidence interval
2020	39,8	29,4	50,2
2021	38,9	26,2	51,6
2022	38,1	22,9	53,3
2023	37,3	19,3	55,2
2024	36,4	15,6	57,3
2025	35,7	11,8	59,6

Source: author's calculations.

Besides the share of gross output of households in the total gross output of agriculture is calculated. The Brown model (exponential smoothing model) with the alpha parameter = 0.3639 was used for forecasting. As a result of such considerations, the share of gross output of households in the total gross output of agriculture for 2020–2025 was predicted (Fig. 3).

According to the results of calculations, we can conclude that in the long term the share of gross agricultural output will decrease and may reach 20.7% by 2025. These forecasts are fully consistent with the trends identified in previous calculations.

It is also obvious that commodity rural household can be the basis for the development of entrepreneurship in the production of agricultural foodstuff in case of rising the level of marketability and effective mechanisms for the sale of products. This can be created through the organization of the system of purchasing manufactured products, or through the organization of the system of consumer cooperation [5, p. 229].

Assessing the state of development of rural households, especially commodity type, we can assume that in the future they will be the basis for increasing the number of small forms of housekeeping in agriculture. The author's understanding of such priorities for rural households is as follows: creating conditions for the expansion of

agricultural land; development of horizontal and vertical forms of agricultural cooperation; creation of market infrastructure for the promotion of small businesses to target segments; improvement of organizational and economic mechanisms of development of state regulation and budget support of small forms of business; creation and improvement of information systems; cultivating the entrepreneurial way of life in rural areas.

The intensification of the shift of rural households to small business structures of the agricultural sector of the economy will be conditioned by the introduction of the mechanism of the market of agricultural lands.

The world experience of the USA shows that for a long time the area of farms in this country increases and the number of farmers decreases [11]. Farmers are considered to be entrepreneurs who sell agricultural products for more than \$ 1,000 a year.

The development of farming, especially family farming, is impossible without adequate funding. In the United States, there is a wide variety of economic entities that give land to agriculture. According to the US Department of Agriculture, at the beginning of 2018, the debt of agricultural entities to commercial banks was 162 billion dollars. On the second place after commercial banks was the Farm Credit system (159 billion dollars). Other creditors: physical entities - \$40 billion,

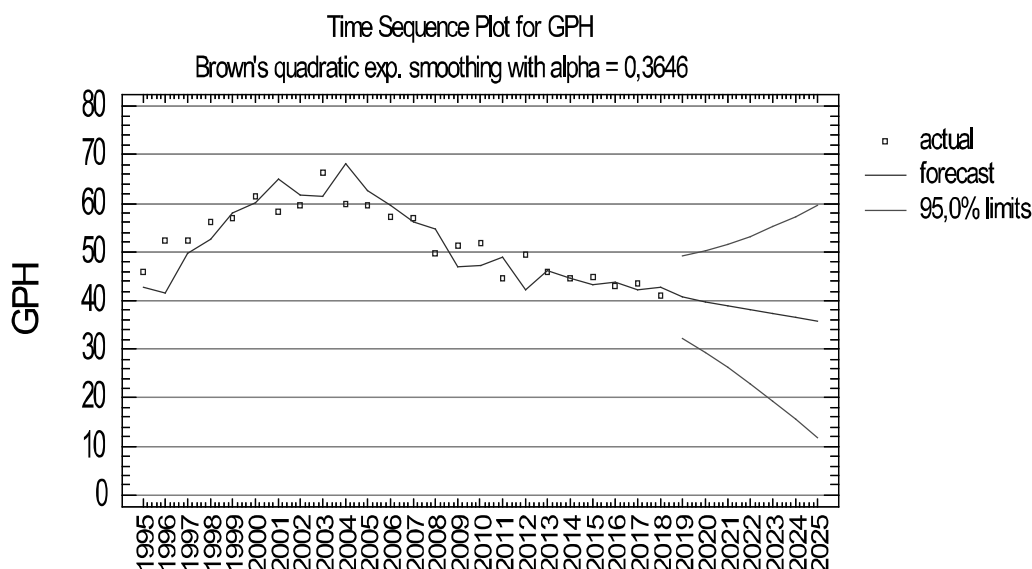


Fig. 3. Forecast of the share of gross output of households in the total gross output of agriculture in 2019–2025.

Source: constructed by the author.

insurance companies - \$15 billion [13]. Interest rates for existing credit lines are regulated rates with margins based on the value of banks' funds. The typical bank margin for these purposes for an operating credit line is 1% to 3%.

In case of lending, special attention is paid to the following categories of agricultural producers: young farmers (up to 36 years), starting farmers (engaged in agricultural business for less than 10 years), small businesses. Applications are accepted via Internet, which saves a lot of time and reduces transaction costs to the farmer. Free training programs and seminars are held for young farmers.

Based on this, we believe that it is important to meet the need for financial resources of small agricultural producers in Ukraine, achieve maximum economic effect from the realization of land potential, and as a result, reduce risks in agricultural production, it will develop land mortgage lending (long-term lending secured by land and land use rights), which requires the development of the Law "On Mortgage of Agricultural Land". However, unfortunately, this process has not yet developed due to the low level of solvency and financial stability of agricultural producers.

According to the results of surveys of heads of rural households in Vinnytsia region, the majority of respondents (78%) would like rural household to bring additional income. 50% of respondents considered the additional purchase of young farm animals, and 1/3 would like to purchase agricultural equipment and tools for small mechanization as opportunities for increase of income. At the same time, only 29% of respondents considered obtaining a loan for the above mentioned purposes. A significant part (89%) intends to apply for financial assistance to relatives and neighbors for the development of rural household.

In this regard, we tend to believe those scientists who think that in our country there is an obstacle for the development of this type of pawn in agriculture is the lack of complexity in solving the problem of mortgage lending [3, p. 28].

It is also established that the low rate of transformation of rural households into family farms is due to such factors as the reluctance of small businesses to take additional risk (especially in crisis conditions) and low creditworthiness of small businesses, which shown up in insufficient or no pawn base. The mechanism for solving this problem is the creation of mortgage funds of the entity at the state or united territorial communities level. It is also expedient to create a Bank of Innovative Technologies at the Ministry of Economic Development, Trade and Agriculture, and to establish agencies for information and consulting support of rural households and small businesses in the

structure of the Departments of Agro-Industrial Development and Agricultural Development Sectors of United Territorial Communities (UTC).

Conclusions. Thus, a complex support of rural households and identification of priority ways will contribute to the progressive creation of enough efficient small business structures in agriculture, and specialized education of owner and members of rural households will allow the most efficient management and forecasting of future development.

One of the most important economic tasks in the long-term development of rural households is the development of agricultural entrepreneurship and the involvement of most of rural population in the market relations in the agricultural sector. In addition, in the context of cooperative relations, there is a need to create a fundamentally new system of information assistance and advisory services, the introduction of information technologies into rural households' activities through the organizational and economic mechanism of state support.

We also believe that in order to develop rural households on an entrepreneurial basis, a competent promotion of small business, the organization of children's education in agricultural colleges and higher educational institutions, increasing the attractiveness of the institute of small farms in agriculture are necessary conditions.

REFERENCES

1. Varchenko, O.M., Svytnous, I.V., Demchak I.M. (2013). Current state and problems of development of personal peasant farms in Ukraine. *Bulletin of agrarian science*. No 11, pp. 55–59. Available at: http://nbuv.gov.ua/UJRN/vaan_2013_11_15 (Accessed 9.02.2020).
2. Demchak, I.M. (2014). Socio-economic essence of special peasant farms. Productivity of agro-industrial production. Issue 25, pp. 3–7. Available at: http://nbuv.gov.ua/UJRN/Pav_2014_25_3 (Accessed 20.02.2020).
3. Prosov, V.M. (2019). Mortgage lending in Ukraine: preconditions and current state. *Scientific notes of the National University "Ostroh Academy"*. Series: Economics. No. 12, pp. 24–34. Available at: http://nbuv.gov.ua/UJRN/Nzn-uoa_2019_12_6 (Accessed 7.02.2020).
4. Svytnous, I.V. (2008). The problem of sustainability of personal peasant farms in times of economic crisis. *Agroinform.* No 3–4, pp. 45–49.
5. Fedyk, O.V. (2014). Methodical approaches to the choice of sales channels for agricultural products by households. *Scientific Bulletin of Lviv State University of Internal Affairs. The series is economic*. 2014. Issue 2, pp. 228–234. Available at: http://www.lvduvs.edu.ua/documents_pdf/visnyky/nvse/02_2014/14fovpgn.pdf (Accessed 18.02.2020).
6. Shpychak, O.M., Svytnous, I.V. (2008). Sales of products by private farms - costs, prices, efficiency. Kyiv: IAE, 320 p.
7. Shulsky, M.G. (2016). Trends in the production of agricultural products by farms in the Lviv region. *Scientific*

Bulletin of Lviv National University of Veterinary Medicine and Biotechnology named after SZ Gzhytsky. Series: Food Technology. Vol. 18, no. 1(4), pp. 234–241. Available at: <https://nvlvet.com.ua/index.php/food/issue/view/173> (Accessed 16.03.2020).

8. Sviatoc Ju. (2007). Ukrainian peasant economy and new economic policy. Cliometric analysis of the socio-economic process: a monograph. Dnipropetrovsk. 216 p.

9. About the personal peasant economy: Law of Ukraine № 742-IV. 15.05.2003. Verkhovna Rada of Ukraine. Legislation of Ukraine. Available at: <http://zakon4.rada.gov.ua/laws/show/742-15> (Accessed 10.03.2020).

10. Statistical information. State Statistics Service of Ukraine. Available at: http://www.ukrstat.gov.ua/operativ/oper_new.html (Accessed 4.02.2020).

11. Like them: American farmers. Dairy Market News. News agency "Milknews". 17.10.2016. Available at: https://milknews.ru/index/novosti-moloko_7237.html (Accessed 15.02.2020).

12. Who Holds Farm Debt? American Farm Bureau Federation. 2018. Available at: <https://www.fb.org/market-intel/who-holds-farm-debt>. (Accessed 18.03.2020).

13. Farm Operating Loans & Line of Credit Loans. Farm Plus Financial. 2019. Available at: <http://www.farmloans.com/farm-loans/farm-operating-line-of-credit-loans>. (Accessed 28.02.2020).

Стратегічні перспективи розвитку особистих селянських господарств в Україні

Дмитрик О.В.

В статті розглядаються особливості функціонування особистих селянських господарств, обґрунтування стратегічних сценаріїв їх розвитку та розробки дієвого механізму посилення їхньої ролі у формуванні агропродовольчих ресурсів України.

Із урахуванням сучасного стану аграрного сектору економіки та реальних умов існування ОСГ, виділено декілька альтернативних напрямів розвитку: індивідуальний (самостійний) розвиток; інтеграція ОСГ з сільськогосподарськими і переробними підприємствами; кооперація з іншими ОСГ та малими суб'єктами господарювання.

Аналіз структури сільськогосподарського виробництва у розрізі ОСГ споживчого, споживчо-товарного та товарного спрямування дозволяє зробити висновок про те, що перспективний розвиток селянських господарств буде зумовлювати зміну їх товарної пропозиції. Результати розрахункового аналізу середніх темпів зростання всіх трьох ресурсних складових показали: середньорічні темпи зростання доходів від оплати праці – 24,3 %; середньорічні темпи зростання фінансової допомоги – 21,5 %; середньорічні темпи зростання доходів від ОСГ – 14,6 %; середньорічні темпи зростання сумарних доходів (ресурсів) – 18,7 %.

Застосувавши статистичний пакет «STATGRAPHICS», проаналізовано тенденції зменшення частки доходів сільських домогосподарств від власної праці і капіталу та зростання доходів від найманої праці. За допомогою моделі ARIMA зроблено прогноз до 2025 р., та виявлено, що частка доходів населення від ОСГ зменшиться до 20,2 %. Проте зменшення доходів від власної праці та капіталу має компенсуватися зростанням доходів

від оплати праці, одержуваної у реальному секторі економіки.

Окрім цього, розраховано частку валової продукції господарств населення в загальному обсязі валової продукції сільського господарства. Для прогнозу було використано модель Брауна (модель експоненціального згладжування) з параметром $\alpha = 0,3639$. За результатами розрахунків можна зробити висновок про те, що на перспективу частка валової продукції сільського господарства буде знижуватися та може досягти до 2025 р. 35,7 %.

На сьогодні очевидним є також те, що товарне ОСГ, за умови підвищення рівня товарності і дієвих механізмів реалізації виробленої продукції, може бути базою для розвитку підприємництва з виробництва сільськогосподарської продукції. Це можливо створити через організацію системи закупівлі виробленої продукції у населення, або через організацію системи споживчої кооперації. Виходячи з цього, вважаємо, що важливого значення для задоволення потреби у фінансових ресурсах малих форм сільськогосподарських товаровиробників в Україні, досягнення максимального економічного ефекту від реалізації земельного потенціалу, і як результат, зниження ризиків в аграрному виробництві буде мати розвиток земельно-іпотечного кредитування. Механізмом вирішення цієї проблеми, на наш погляд, є створення заставних фондів суб'єкта на рівні держави або об'єднаних територіальних громад.

Ключові слова: особисте селянське господарство, доходи сільських домогосподарств, сімейні фермерські господарства, сільські території, іпотечне кредитування, кооперація.

Стратегические перспективы развития личных крестьянских хозяйств в Украине

Дмитрик О.В.

В статье рассматриваются особенности функционирования личных крестьянских хозяйств, обоснование стратегических сценариев их развития и разработки действенного механизма усиления их роли в формировании агропродовольственных ресурсов Украины.

С учетом современного состояния аграрного сектора экономики и реальных условий существования ЛКХ выделено несколько альтернативных направлений развития: индивидуальное (самостоятельное) развитие; интеграция ЛКХ с сельскохозяйственными и перерабатывающими предприятиями; кооперация с другими ЛКХ и другими малыми субъектами хозяйствования.

Анализ структуры сельскохозяйственного производства в разрезе ЛКХ потребительского, потребительско-товарного и товарного направления позволяет сделать вывод о том, что перспективное развитие крестьянских хозяйств будет вызывать изменение их товарного предложения. Результаты анализа средних темпов роста всех трех ресурсных составляющих показали, среднегодовые темпы роста доходов от оплаты труда – 24,3 %; среднегодовые темпы роста финансовой помощи – 21,5 %; среднегодовые темпы роста доходов от ЛКХ – 14,6 %; среднегодовые темпы роста суммарных доходов (ресурсов) – 18,7 %.

Применив статистический пакет «STATGRAPHICS», проанализированы тенденции уменьшения доли доходов сельских домохозяйств от собственного труда и капитала, рост доходов от наемного труда. С помощью модели

ARIMA сделан прогноз до 2025 г., и обнаружено, что доля доходов от ЛКХ уменьшится до 20,2 %. Однако уменьшение доходов от собственного труда и капитала должно компенсироваться ростом доходов от оплаты труда, получаемой в реальном секторе экономики.

Кроме этого рассчитано часть валовой продукции хозяйств населения в общем объеме валовой продукции сельского хозяйства. Для прогноза была использована модель Брауна (модель экспоненциального сглаживания) с параметром $\alpha = 0,3639$. По результатам расчетов можно сделать вывод о том, что в перспективе доля валовой продукции сельского хозяйства будет снижаться и до 2025 г. может достичь 35,7 %.

На сегодня очевидным является тот факт, что товарное ЛКХ, при условии повышения уровня товарности и действенных механизмов реализации продукции, может быть базой для развития предпринимательства по произ-

водству сельскохозяйственной продукции. Это возможно создать через организацию системы закупки продукции у населения, либо через организацию системы потребительской кооперации. Исходя из этого, считаем, что важное значение для удовлетворения потребности в финансовых ресурсах малых форм сельскохозяйственных товаропроизводителей в Украине, достижения максимального экономического эффекта от реализации земельного потенциала, и как результат, снижение рисков в аграрном производстве, будет иметь развитие земельно-ипотечного кредитования. Механизмом решения этой проблемы, на наш взгляд, является создание залоговых фондов субъекта на уровне государства или объединенных территориальных общин.

Ключевые слова: личное крестьянское хозяйство, доходы сельских домохозяйств, семейные фермерские хозяйства, сельские территории, ипотечное кредитование, кооперация.



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