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**THE EVALUATION OF THE FACTORS OF AGRICULTURAL
PRODUCTION FINANCIAL FACILITIES DEVELOPMENT**

The article deals with the evaluation of agricultural production financial facilities development with emphasis on its financial assurance key figures. The peculiarities of agricultural production financial facilities development and the improvement of regional agricultural enterprises financial assurance have been defined. The analysis of the peculiarities of financial resources use in modern conditions has been made. The control of the financial resources helped to determine forecasting value of agricultural production financial facilities.

Key words: financial resources, financial facilities, agricultural production, the evaluation of factors.

JEL Classification: E62, G32.

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**ОЦІНКА ЧИННИКІВ ФОРМУВАННЯ ФІНАНСОВОГО
ПОТЕНЦІАЛУ АГРАРНОГО ВИРОБНИЦТВА**

В статті розглянуто оцінку формування фінансового потенціалу аграрного виробництва з окресленням показників його фінансового забезпечення. Визначено особливості формування фінансового потенціалу аграрного виробництва і удосконалення фінансового забезпечення аграрних підприємств регіону, що дає змогу проаналізувати можливості використання фінансових ресурсів в сучасних умовах. Моніторинг фінансових ресурсів допоміг визначити прогнозну величину фінансового потенціалу аграрного виробництва.

Ключові слова: фінансові ресурси, фінансовий потенціал, аграрне виробництво, оцінка чинників.

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ОЦЕНКА ФАКТОРОВ ФОРМИРОВАНИЯ ФИНАНСОВОГО

ПОТЕНЦИАЛА АГРАРНОГО ПРОИЗВОДСТВА

В статье рассмотрена оценка формирования финансового потенциала аграрного производства с очерчиванием показателей его финансового обеспечения. Определены особенности формирования финансового потенциала аграрного производства и усовершенствования финансового обеспечения аграрных предприятий региона, который дает возможность проанализировать возможности использования финансовых ресурсов в современных условиях. Мониторинг финансовых ресурсов помог определить прогнозную величину финансового потенциала аграрного производства.

Ключевые слова: финансовые ресурсы, финансовый потенциал, аграрное производство, оценка факторов.

Problem's setting. Agricultural production may have an efficient development due to the commensurability and equation of real and potential volume of financial resources, which assure financial facilities and play the important role in stable activity of agricultural sphere. At the same time, the dynamism of market environment almost in every case causes the change of agricultural production conditions. Distribution and redistribution of income and financial resources between agricultural market entities influences the volume of agricultural enterprises financial resources, determines the conditions of their access to cheap financial loans.

Reasonability of problems solving of agricultural production financial facilities in this particular way is caused, on the one hand, by vectorial retargeting of financial system towards favourable financial environment assurance. On the other hand, it is caused by the improvement of agricultural enterprises business function financial component, which is adjusted to external environment reality.

Recent research and publications analysis. The problem of financial facilities development hasn't been paid enough attention for a long period of time by the national researchers. Nowadays different aspects of this problem are a major focus of interest of the famous agrarian researchers, including A.A. Aiupov, A.A. Kurilova, Y. A. Anisimova (2015), V.G. Boronos (2011), O.Y. Hudz (2013), M.Y. Demianenko

(2005), I.V. Karpochuk (2011), I.I. Chunyańska (2009) etc. The main attention in their investigations is paid to the problems of development, distribution and use of financial resources at the level of the state, agricultural production sphere and agricultural enterprises. At the same time there are a lot of problems, which have been investigated very slightly or still have polemical character. There is no one and only point of view according to methodical principles of the specification of time and resource measures of agricultural production financial assurance with the emphasis on the sphere particular characteristics.

The aim of the article is to define the factors of agricultural production financial facilities, which are taken as a basis of macroeconomic analysis and the explanation of forecasting characteristics of the region agricultural enterprises development in Ukraine's agroclimatic zones.

Key research findings. Financial resources, which are the complex of the cash resources funds, are in the possession of different economic entities (the state, sphere, enterprise) and specify only one of the components of financial facilities – their really consumed part. Therefore financial resources can't generally register a variety of financial facilities peculiarities, such as the possibility to realize secret reserves, the ability to increase the volume of financial resources, the probability of the additional investment resources derivation etc.

In particular the inability of the concept "financial resources" to describe all the economics possibilities according to the production of different financial flows caused the appearance of the concept "financial facilities". The most meaningful and at the same time laconic definition of financial facilities was given by I.I. Chunyańska as "the state's ability to raise funds and use them efficiently with the aim to provide economic development" (Chunyańska I.I., 2009). While investigating the concept "financial facilities" at the state level V.G. Boronos defines it as the complex of specifications, "which are able to provide integral assessment on the first place - of the financial condition at the macrolevel and microlevel; factors of financial condition change on the second place; and finally the challenges of the stable economic growth or financial economic activity success at the microlevel" (Boronos

V.G., 2011). We share the scientist's opinion according to the fact that state financial facilities are the process of financial resources efficient use providing "the removal of the possibility of financial means abuse and financial flows redirection to the use spheres which are not supported by the law" (Anisimova Y., 2009). We agree that financial facilities are also the complex of diagnostic, support and check-out measures, which have financial character, provide the efficiency of financial activity of economic entities and minimize the exposure of internal and external environment to financial resources (A.A. Ajupov, & A.A. Kurilova, & Iu.A. Anisimova, 2015). However, in our opinion, state financial facilities are the complex of real and suspected financial resources and income, which may be used for any measures solution, that also includes measures, received by means of the redistribution from one use sphere to another. It may happen without the transition of critical limits, that is without the threat to destroy spheres, from which financial resources have been withdrawn.

It has a clear explanation, as financial resources stockout causes the underfunding of the needs in material production sphere; the use of funds inappropriately; great amount of debts and problems with their operation; low level of bank system plough-back; the raise of percentage rates for short credit use; the decrease of the volume of long-term bank crediting; the increase of the inflation and the currency zig; withdrawal of financial assets abroad; the deformations in accounting and possible financing fraud.

With the aim to unite key characteristics of this complicated economic category and solve the problems of this investigation, we offer to determine financial facilities of agricultural production as general function and estimated factor of industrial sphere according to the development, distribution and use of financial resources for region agricultural enterprises efficient functioning and development.

The complex of financial facilities components of agricultural production sphere should be reflected in the system of financial analysis rates, which are worth reviewing in terms of direct and relative. However, for agricultural enterprises financial activity not the rates, but their threshold amounts – boundary values (or indicators) really matter. Their nonobservance leads to financial flexibility

breakdown, prevents normal development of different reproduction elements, causes and develops negative, destructive tendencies in agricultural production.

The definition of financial facilities with the use of relative efficiency rates (rates of business activity) are based on the integrated index of agricultural production financial facilities, which is calculated as geometric average of efficiency rates – the factors of financial facilities sphere development. In such a case, taking into account the significance of financial resources and their sources as factors of financial facilities development, we suppose it rational to review not financial resources and their sources business activity rate use, but to consider complex influence of the component rates: the circulation of manufactured goods, debit debts, cash resources, their equivalents and following financial investments, long-term and short term bank loans, state financial support (Gudz O.Ie., & Stetsiuk P.A., & Navrotskyi S.A., & Aleksiiichuk V.M., 2013).

Direct rates of agricultural production financial facilities determination are the indicators of earning capacity market based valuation due to the existing region agricultural enterprises budgeting and market variables (such as prices, demand and supply, competitiveness etc.), which may be potentially and practically obtained on the base of conditions, determined by financial resources market.

Every region, which takes part on equal basis in the process of agricultural production earning capacity creation has benefits for the appropriate primary income (it is primary in the sense, in which it is formed by the market). Actually, the region gets such earning capacity in the process of primary distribution of created and realized gross domestic (or regional) product. General income of agricultural production (income or gross value added, that is income without financial loss) is formed and distributed among regions not only in practice, but also implicitly, on the basis of rated limiting conditions of financial facilities (financial resources and the price for funding sources).

Total income, which falls within every region, implicitly corresponds to the limiting level of agricultural production financial facilities. In a wide sense, the complex of agricultural production primary income is a general agricultural

production potential income, apart from income, which legally belongs to the state in the form of direct or indirect taxes.

In such a way, agricultural production complex earning capacity consists of the gross value added (including depreciation), because the latter acquires the form of operating earnings in the short-term period. Agriculture production and region agricultural enterprises financial facilities may develop in manner of accuracy degree growth according to:

- gross produce (private financial resources);
- gross value added (gross produce);
- added value (pure income, without depreciaton);
- total profit;
- income, which remains at the person's disposal after tax payment and other obligatory budgetary payments.

In any case financial facilities are based in the conceptual sense on the theory of financial resources management and financial flows development. The change of their characteristics influences financial results of activity and paying capacity of region enterprises and agricultural production altogether.

Macroeconomical analysis of agricultural production should serve as economic justification of financial facilities characteristics, taking into account the acceptance of region agricultural enterprises efficient functioning criteria due to assurance of equal and sustainable movement of financial flows. Pure income, as the factor of financial facilities development, is a direct rate of region agricultural enterprises financial obligations absorbing.

During 2008-2014 pure income of agricultural enterprises of the Forest-steppe zone increased in 4,4 times. In the structure of financial assurance the amount of private financial resources overbalances the amount of borrowed assets more than in 2,0 times. In the structure of borrowed financial assets relative share of short-term loans increased in 2,6 times. What concerns long-term loans, relative share increased more than in 2 times (Register of the licensed participants of fund market, 2008-2014). The dimension of state financial support comprises in average 7,4 %, among

them at the expense of household allowance 49,2 % (for plant production - 0,6 %, for animal production – 48,6 %); at the expense of the special taxation scheme – 50,8 % (in plant production field – 3,5 %, in animal production field – 47,3 %) (The State Statistics Service of Ukraine, 2014).

In the Polisia zone and the Western region the portion of short-term loans in the structure of borrowed assets financing distribution comprises 8,7 %, the portion of long-term loans comprises 50,3 % (Register of the licensed participants of fund market, 2008-2014). The dimension of region agricultural production state financial support comprises only 3,3 %. In its structure the household allowance for plant production is formed only within 0,2 %, for animal production – 5,6 %; financing of the sphere at the expense of tax allowance in plant production comprises 71,9 %, in animal production it comprises 22,3% (The State Statistics Service of Ukraine, 2014).

During the period of investigation the Polisia and the Western regions increased the volume of private financial resources in 2,8 times, the volume of pure income – in 4,4 times. In such a case the amount of long-term loans for sphere development increased in 1,9 times, the amount of short-term loans increased in 3,0 times (Register of the licensed participants of fund market, 2008-2014).

Agricultural production of the Steppe zone is provided with its own financial resources in 61,4 %, pure income makes 42,5 %. The sphere's region financing at the expense of borrowed assets fundraising with a short-term period of validity is formed within 12,4 %, with a long-term period – 80,4 % (Register of the licensed participants of fund market, 2008-2014). The distribution of state government allowance according to the field direction is formed percentagewise to the volume of plant and animal production as 70:30. At the expense of assets accumulation of value-added percentage the support of agricultural producers increased within the special taxation scheme to 1950, 7 million hryvnias, that is in 3,8 times, during 2008-2014 (The State Statistics Service of Ukraine, 2014).

With the help of the special programme «MatCad» we have conducted the calculation of the influence of financial sources activity on agricultural production pure income with its further distribution among Ukraine's agroclimatic zones,

especially the Steppe zone (with and without account of the Autonomous Republic of Crimea). It was done taking into account the fact that the bank crediting and state financial support, the amount of which is several times bigger than the direct levels of other rates, used in financial facilities parameters development.

Variable-based scheme of agricultural production pure income forecasting according to Ukraine's agroclimatic zones on the basis of curvilinear relation is shown in the chart 1, forecasting characteristics of the financial facilities for 2014 are given in picture 1.

Chart 1

Forecasting of agricultural production pure income according to Ukraine's agroclimatic zones

Agroclimatic zone	Polynomial of pure income forecasting	Determination coefficient (R^2)
The Forest steppe	$Y = -2 \cdot 10^{-17}x^5 - 3 \cdot 10^{-12}x^4 + 2 \cdot 10^{-7}x^3 + 0,0053x^2 - 72,76x + 391390$	0,9921
	$Y = 0,00002x^2 - 0,5438x + 58689,24$	0,4256
The Polisia and the Western region	$Y = 1 \cdot 10^{-11}x^4 - 4 \cdot 10^{-7}x^3 + 0,0046x^2 - 19,01x + 36481$	0,8766
	$Y = 0,00008x^2 - 0,8278x + 16798,43$	0,4537
The Steppe with account of the Autonomous Republic of Crimea	$Y = 6 \cdot 10^{-13}x^4 - 6 \cdot 10^{-8}x^3 + 0,0022x^2 - 30,85x + 184232$	0,9763
	$Y = 1,523x + 30812,49$	0,796
	$Y = 0,00005x^2 - 0,7436x + 51164,98$	0,8668
The Steppe (without the Autonomous Republic of Crimea)	$Y = 4 \cdot 10^{-13}x^4 - 5 \cdot 10^{-8}x^3 + 0,0018x^2 - 27,17x + 176533$	0,9798
	$Y = 1,506x + 35677,82$	0,787
	$Y = 0,00005x^2 - 0,7186x + 56484,88$	0,8612

The source: author's calculations.

It has been determined that there is a close connection between the level of financial assurance and pure income according to all agroclimatic zones. In such a way, for the regions of the Forest steppe zone the polynomial of the second order is acceptable ($R^2 = 0,4256$). In this context forecasting characteristics of pure income for one region will range from 3104,4 million hryvnias, which is 11 % of the compound rate of this zone – 27940 million hryvnias.

The tightness of the rates parametric interrelation in the Polisia zone and the Western region ($R^2 = 0,4537$) defines the polynomial of pure income forecasting per one region 1601,4 million hryvnias on the average or 14,3 % from its general amount (11210 million hryvnias). In the Steppe zone the polynomial of the rate forecasting

shows significant density ($R^2 = 0,8612$). It means that agricultural enterprises activity profitableness of 9 regions directly depends on bank crediting and state financing.

Upon condition of all the Steppe zone regions integration to the forecasting of pure income volume, its level will correspond to 54,5 % of Ukraine's agricultural production compound income. In this context one region will receive on the average 5220 million hryvnias of pure income. At the same time, within the absence of the Autonomous Republic of Crimea, agricultural production will receive less private financial resources in the amount of 205 million hryvnias. The level of one region profitableness will correspond to 12 % of its overall dimension according to the agroclimatic zone agricultural production (40120 million hryvnias).

It has been defined, that taking into account financial facilities of the Autonomous Republic of Crimea, overall rate of the Steppe zone agricultural production must correspond to 139705,6 million hryvnias on the average, the amount of bank crediting will comprise not less than 72146,37 million hryvnias (including short-term loans – 9379 million hryvnias and long-term loans – 52770,37 million hryvnias), state financial support will comprise 4643,53 million hryvnias (especially to support the sphere of plant production at the expense of government allowances within 46,44 million hryvnias, to support the sphere of animal production – 116,08 million hryvnias). Boundary parameters of financial facilities per one region will correspond to 9612,87 million hryvnias on the average (fig. 1).

Agricultural production financial capacity, under condition of the Autonomous Republic of Crimea expulsion from the Steppe zone, will decrease to 38 % and will comprise 86515,8 million hryvnias. Undersupply of overall dimension of private financial resources will comprise 8800 million hryvnias. Besides, the volume of state financial support will decrease to 48,3 %, especially the amount of funds according to the special taxation scheme of the plant and animal production sphere will comprise 13 % from the level of 2013.

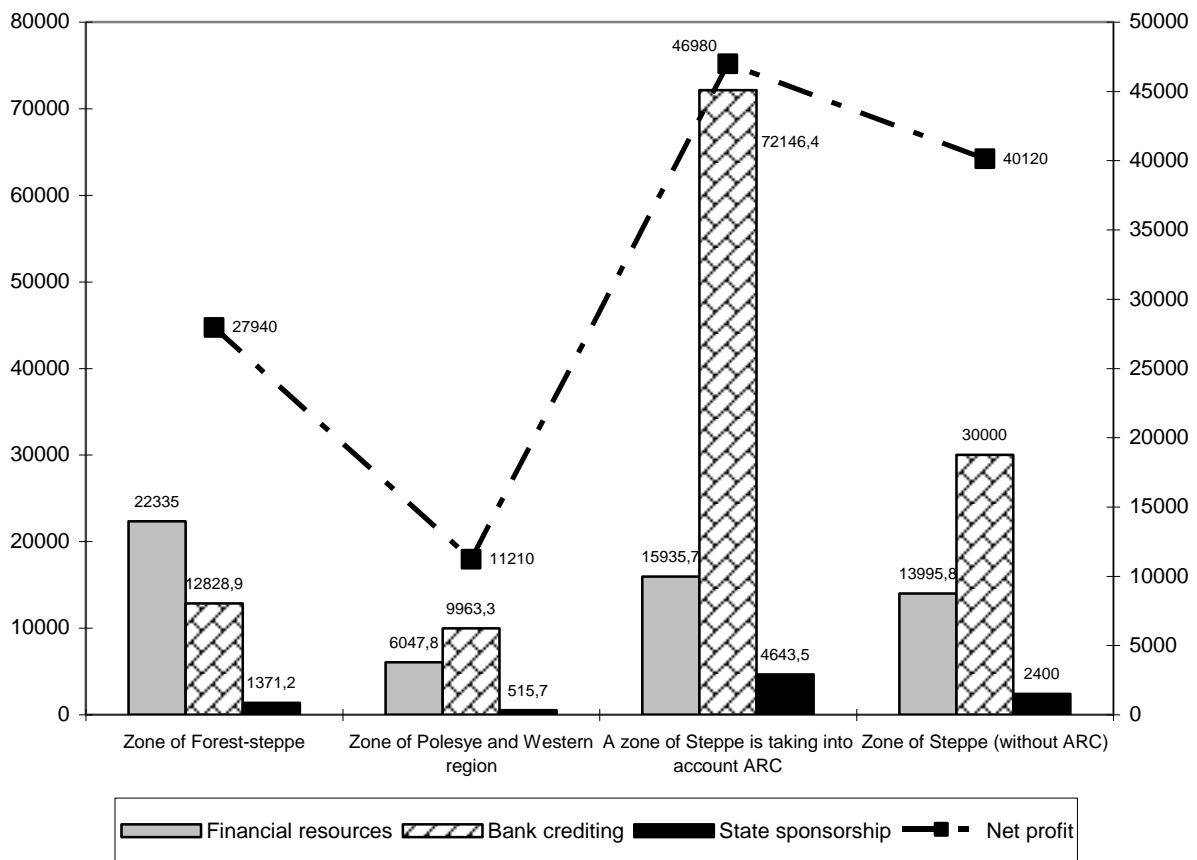


Fig. 1. Prognosis parameters of financial potential of agro-climatic zones of agrarian production of Ukraine are on 2014p., million hrn.
The source: author's calculations.

Discharged funds from the state budget financial flow and banking sector will make it possible to form financial facilities potential sources for agricultural enterprises development under condition of improvement of legal framework in the following direction and state control scheme of agricultural production finance and credit assurance.

Conclusion. Complexity of the category “financial facilities” shows that it should be reviewed as the ability to transform financial resources into the real factor of agricultural production development. Financial facilities may be used as estimating rate of profitability critical range, cost saving, financial resources distribution possible degree establishment between agricultural enterprises activity spheres.

Taking into account the importance of bank crediting and state financial support as the factors of region financial facilities development, it is reasonable to consider their overall influence on earning capacity, which corresponds to agricultural production financial facilities critical level.

Commensurability establishment of all elements and components of financial facilities, the use of their possibilities will assure the equation of nationwide, sectorial and private interests for economic development and the activation of long-term investment activity.

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