

УДК 338.43:633.1 (477.72)

S. I. Samaichuk

ECONOMIC EFFICIENCY OF GRAIN PRODUCTION IN AGRICULTURAL ENTERPRISES

Анотація. Досліджено сучасний стан зерновиробництва в Херсонській області. Проаналізовано ефективність виробництва зернових культур в сільськогосподарських підприємствах, запропоновано шляхи її підвищення.

Ключові слова: зерновиробництво, економічна ефективність, урожайність, собівартість, прибуток, рівень рентабельності.

Summary. The present state of grain production in the Kherson region is studied. The efficiency of production of grain crops in agricultural enterprises is analysed, ways of its increase are suggested.

Key words: Grain production, economic efficiency, yield, prime cost, profit, profitability level.

Relevance of the problem. At the current stage of development, food security of any country depends to a large extent on the effective functioning of grain production as the main source of food supply to the population, as well as the livestock sector as the supplier of feed.

To meet the needs of the state for the necessary amount and range of grain, systematic and balanced production, storage, processing and use of grain resources should be established, and a complete modification of the state grain production management sys-

tem should be undertaken. It is about the formation of new connections between producers and consumers of grain on the basis of mutual interest, which will promote the growth of production volumes and optimal use of products.

Analysis of recent research and publications. The works of well-known scientists and economists are devoted to studying the problems of efficient functioning of grain production: V. G. Andriychuk [1], S. S. Bakay, Y. D. Bilyk, V. I. Boykj, P. I. Gaidutsky, Y. V. Holubkova [2], M. V. Zaburannoi [3], M. G. Lobas, P. M. Ma-

© С. І. Самайчук, 2017

Бібліографія ДСТУ:

Самайчук С. І. Економічна ефективність виробництва зерна на сільськогосподарських підприємствах / С. І. Самайчук // Вісник Бердянського університету менеджменту і бізнесу. — 2017. — № 3 (39). — С. 70–74.

References (APA):

Samaichuk, S. I. (2017). *Ekonomichna efektyvnist vyrobnytstva zerna na silskohospodarskykh pidpriemstvakh* [Economic efficiency of grain production in agricultural enterprises]. *Visnyk Berdianskoho universytetu menedzhmentu i biznesu*, 3 (39), 70–74 (in Ukr.).

karenko, P. T. Sabluk, V. F. Saiko, V. P. Sytnyk, L. M. Khudolii, I. I. Chervena, O. M. Shpychak and others. However, a number of aspects of this problem remain poorly studied and require in-depth research. In particular, there is a series of issues related to establishing economic relations between producers and consumers of grain, formation of supply and demand in the region, increasing economic efficiency of grain production in agricultural enterprises in the region, and developing regional market infrastructure. All this testifies to the relevance of the topic of the research and determines its choice.

The purpose of the paper is to study the current state of grain production in the Kherson region and the factors that influence the economic efficiency of grain crops production in agricultural enterprises.

Presentation of the main research material. The main direction of the development of the agrarian sector of economy of the Kherson region is the formation of a highly efficient grain product subcomplex. Occupying 4,7 % of the territory and having 2,5 % of the population of the state, Kherson region produced 4,4 % of the total gross grain production in Ukraine in 2015. At the same time, the share of the region in the collected area of grain and leguminous crops of

all categories of farms was 5,3 %, but the crop capacity (33,6 ts/ha) was lower than the average level (41,1 ts/ha) by 7,5 ts/ha or by 18,2 %.

Grain production in the Kherson region occupies a special place among other branches of plant growing, as it satisfies to a large extent the needs of the population in food products, influences the state and financial conditions of reproduction in the agro-industrial complex, and is the main source of income of producers. The historically formed set of natural climatic conditions, large massifs of fertile lands, centuries-old cultivating skills, favorable geographic location of the region have a positive impact on the development of the grain production. In recent years, there has been a tendency in the development of grain production in the field of plant growing in the Kherson region, which mainly ensured the profitability of the entire industry, as well as the whole agro-industrial complex. This was facilitated by the improvement of technical re-equipment of agroformations, intensive production technologies, favorable weather and climatic conditions.

The analysis of production of main types of plant products in recent years has shown an increase in production per capita (Table 1).

Table 1

Dynamics of production of basic types of plant products per one person, kg (calculated according to data [4])

Plant products	Years							
	2000	2005	2010	2011	2012	2013	2014	2015
Grain crops, % to 2000	974 100,0	1359 139,5	1389 142,6	2290 235,1	976 100,2	1569 161,0	2015 206,9	2462 252,8
Potatoes, % to 2000	247 100,0	183 74,1	229 92,7	243 98,4	255 103,2	253 102,4	260 105,3	270 109,3
Vegetables, % to 2000	352 100,0	465 132,1	771 219,0	1037 294,6	1191 338,4	1080 306,8	1198 340,8	1175 333,8
Fruits and berries, % to 2000	55 100,0	52 94,5	54 98,2	80 145,5	74 134,5	76 138,2	70 127,3	61 110,9

The volume of grain production in 2015 compared to 2000 has increased by more than 2,5 times, vegetable production — by more than 3,3 times, fruit and berries production increased by 10,9 %, potatoes — by 9,3 %.

The transformation of economic conditions and the organizational and legal field in agrarian relations in the state and region caused a change in the «balance

of power» among different forms of organization and ownership in the agricultural sector of the Kherson region. At present, a significant role in regional agricultural production belongs to households (Table 2).

The table indicates that in 2015 their share in gross agricultural production was 47,0 % (in 2000 — 52,3 %). This includes crop production — 44,7 %

Table 2

Share of households in the production of agricultural products in the Kherson region, % [4]

Products	Years							
	2000	2005	2010	2011	2012	2013	2014	2015
Agricultural products	52,3	59,8	55,4	51,6	55,8	53,2	50,8	47,0
Plant products	38,2	48,8	48,7	45,6	48,3	50,2	49,5	44,7
Grain crops	15,5	41,3	39,1	44,8	40,5	44,0	45,8	39,2
Sunflower	13,6	40,7	36,1	26,0	35,9	21,1	13,2	15,4
Potatoes	99,2	97,9	93,4	91,5	94,3	92,7	92,3	92,3
Vegetables	61,3	69,1	67,8	55,0	68,6	70,7	64,1	67,1
Fruits and berries	79,3	67,7	51,7	67,9	50,2	67,1	66,4	53,5
Grapes	16,6	15,9	26,3	21,4	28,4	34,3	30,2	13,8

Products	Years							
	2000	2005	2010	2011	2012	2013	2014	2015
Livestock products	82,1	88,5	79,1	78,0	79,7	63,0	54,8	55,3
Meat (live weight)	73,0	89,4	82,7	83,1	82,3	81,4	74,1	64,0
Milk	69,2	92,1	91,5	90,7	92,3	88,8	87,1	86,8
Eggs	73,5	68,6	40,5	37,6	38,6	16,1	10,8	12,1
Wool	20,7	37,1	51,5	49,4	47,7	57,6	55,6	56,1

(in 2000 — 38,2 %), livestock products — 55,3 % (in 2000 — 82,1 %). The agricultural enterprises of the region in 2015 retained leading positions only in the production of grain crops (60,8 %), sunflower (84,6 %) and grapes (86,2 %). The production profile of farm households was determined by the cultivation of potatoes, vegetables and fruit and berry plantations.

The value of gross agricultural production in the Kherson region has increased over the last five years. In 2015 it amounted to 10836,1 mln hrn, which is 8,7 % more than in 2011 and 5,0 % more than in the previous year (Table 3).

The value of gross production of grain crops in 2015 compared to 2011 has increased by 137,2 thous.

Table 3

Composition of gross agricultural output in Kherson region (in all categories of farms, at constant prices in 2010, mln hrn) [4]

Gross output	Years					2015 in % to	
	2011	2012	2013	2014	2015	2011	2014
Agricultural products	9964,3	8334,2	9811,1	10315,4	10836,1	108,7	105,0
Plant products	8113,4	6351,3	7490,8	7729,5	8520,2	105,0	110,2
grain crops	2576,8	1143,2	1798,1	2247,1	2714,0	105,3	120,8
technical crops	2098,6	1527,2	2020,2	1759,5	2351,2	112,0	133,6
potatoes, vegetables, melons	2794,0	3272,0	3050,6	3301,3	3240,5	116,0	98,2
fruits and berries, grapes	445,6	352,1	439,8	387,0	309,9	69,5	80,1
fodder crops	128,1	81,6	85,4	89,6	106,0	82,7	118,3
other products and changes in volumes of work in progress	70,3	24,8	96,7	-55,0	-201,4	—	366,2
Livestock products	1850,9	1982,9	2320,3	2585,9	2315,9	125,1	89,6
cattle and poultry	806,8	825,4	932,7	941,1	784,1	97,2	83,3
Milk	758,2	779,5	775,5	760,5	753,4	99,4	99,1
Eggs	222,9	252,4	559,0	840,2	734,2	329,4	87,4
Wool	0,7	0,6	0,6	0,6	0,5	71,4	83,3
other products	62,3	125,0	52,5	43,5	43,7	70,1	100,5

hrn or by 5,3 %, industrial crops — by 252,6 thous. hrn or by 12 %, potatoes, vegetables and melons — by 446,5 thous. hrn or by 16 %. The production of fruits and berries and grapes has significantly decreased by 135,7 thous. hrn or 30,5 %, fodder crops — by 22,1 thous. hrn or by 17,3 %. Livestock production for the years studied varied. In 2015 it amounted to 2315,9 mln hrn, which is 25,1 % more than in 2011 and 10,4 % less than in the previous year.

Crops occupy 60 % of the overall sown area in Kherson region and provide the main part of income of agricultural enterprises.

The largest gross production and yield of crops in agricultural enterprises of the region were recorded in 2015 — 1574,0 thous. ha and 35,4 ts/ha respectively (Table 4).

On average, in 2000–2015, the gross grain harvest amounted to 1044,6 thous. tons. The harvested area in 2015 was 445,2 thous. ha which is 11,2 % higher than in 2014. Assessing the tendency towards the dynamics

of grain yield, we can conclude that in the Kherson region, there were basically favorable conditions for the development of branches of the crop field. In relation to 2000, we have seen a positive trend regarding the grain crop yield level.

Sales of the produced products is one of the main aspects of the economic activity of agricultural enterprises and the final stage of the full cycle of production assets circulation. In the process of implementation, an enterprise returns in value terms the funds spent on production and sales [5]. The level of grain marketability in agricultural enterprises of the Kherson region despite significant fluctuations during 2000–2015 still remains at a relatively high level, on average 68,3 % (Table 5).

However, although the level of marketability is declining, it still remains at a relatively high rate, on average, 42,4 %. This indicates that grain production is one of the few profitable agricultural products for which producers receive funds.

Table 4

Dynamics of sown areas, gross crop output and crop yields in agricultural enterprises of the Kherson region (calculated according to data [4])

Years	Harvested area			Gross output			Yield		
	Thous. ha	In % to		Thous. tons	In % to		Ts/ha	In % to	
		2000	Previous year		2000	Previous year		2000	Previous year
2000	592,6	100,0	100,0	985,0	100,0	100,0	17,2	100,0	100,0
2005	413,6	69,8	69,8	903,2	91,7	91,7	21,8	126,7	126,7
2010	416,8	70,3	100,8	922,8	93,7	102,2	22,1	128,5	101,4
2011	422,6	71,3	101,4	1369,7	139,1	148,4	32,4	188,4	146,6
2012	262,7	44,3	62,2	488,0	49,5	35,6	18,6	108,1	57,4
2013	383,6	64,7	146,0	944,6	95,9	193,6	24,6	143,0	132,3
2014	400,3	67,5	104,4	1169,1	118,7	12,8	29,2	169,8	118,7
2015	445,2	75,1	111,2	1574,0	159,8	134,6	35,4	205,8	121,2

Table 5

Dynamics of the level of grain marketability in agricultural enterprises of the Kherson region (calculated according to data [4])

Years	Gross output, thous. tons	Commodity products, thous. tons	Level of marketability,%
2000	985,0	553,8	56,2
2005	903,2	563,3	62,4
2010	922,8	727,0	78,8
2011	1369,7	806,1	58,9
2012	488,0	458,2	93,9
2013	944,6	644,9	68,3
2014	1169,1	880,0	75,3
2015	1574,0	1078,5	68,5

An important stage in the analysis of the development of grain production is the analysis of indicators of economic efficiency, since efficiency as an economic category reflects the relationship between the results obtained and the resources spent on their achievement.

We analysed the economic efficiency of grain crops production in agricultural enterprises of the Kherson region for the last five years (Table 6). According to table 6, we can conclude that in recent years market conditions and price situation have changed

dramatically, which resulted in the profitability of the grain industry being extremely unstable. In 2013, a loss of 69,8 mln hrn was obtained from the production of grain crops, the profitability level was negative and amounted to minus 7,3 %. This was caused by adverse natural and climatic conditions. For the rest of the time, grain production was profitable. In 2015, compared to 2011, profit increased by more than 4,5 times, and compared to 2014 — by almost 3,6 times, due to which profitability increased by 21,2 and 27,1 percentage points respectively

Table 6

Economic efficiency of production of grain crops in agricultural enterprises of the Kherson region (calculated according to data [4])

Indexes	Years					2015 in % to	
	2011	2012	2013	2014	2015	2011	2014
Harvested area, thous. ha	422,6	262,7	383,6	400,3	445,2	105,3	111,2
Yield, ts/ha	17,2	18,6	24,6	29,2	35,4	205,8	121,2
Gross output, thous. ts	1369,7	488,0	944,6	1169,1	1574,0	114,9	134,6
Cost of 1 c of grain, hrn	88,08	153,32	134,34	135,31	162,12	184,1	112,4
Grain total, thous. ts	806,1	458,2	644,9	880,0	1078,5	133,8	122,6
Commodity level,%	58,9	93,9	68,3	75,3	68,5	+9,6 в. п.	-6,8 в. п.
Cost of sold products, mln hrn	1053,2	767,3	889,9	1642,8	3040,9	288,7	185,1
Average selling price of 1 ts of grain, hrn	130,65	167,47	138,00	186,70	281,96	215,8	151,0
Commercial cost of 1 ts of grain, hrn	103,92	155,59	148,83	155,85	191,93	184,7	123,2
Profit, mln. hrn	215,5	54,4	-69,8	271,4	971,0	450,6	357,8
Profitability level,%	25,7	7,6	-7,3	19,8	46,9	+21,2 в. п.	+27,1 в. п.

Conclusion. Despite the positive dynamics of development and positive results, so far, no radical changes have taken place in grain production. An important reason for this situation is the extensive method of managing grain production in the region. Therefore, the necessary qualitative changes in the production of grain are boundlessly connected with the transition to an intensive way of development of this branch of agrarian production.

Under existing economic conditions, agricultural enterprises need to identify internal reserves, increase financial stability, strengthen control over the use of raw materials and use high-yielding crops of intensive type, thereby increasing the economic efficiency of production by obtaining highly profitable, environmentally friendly and high-quality products.

Література

1. Андрійчук В.Г. Ефективність діяльності аграрних підприємств: теорія, методика, аналіз : монографія / В.Г. Андрійчук — К. : КНЕУ, 2005. — 292 с.
2. Голубков Є. В. Організаційно-економічні основи аграрної політики та напрями підвищення ефективності аграрних підприємств / Є.В. Голубков // Вісник ХНАУ. Серія «Економічні науки» : зб. наук. пр. / Харк. нац. аграр. ун-т ім. В. В. Докучаєва. — 2015. — №3. — С. 420–429.
3. Забуранна Л. В. Економічна ефективність виробництва зерна та шляхи її підвищення в сільськогосподарських підприємствах / Л. В. Забуранна // Економіка АПК. — 2014. — № 3. — С. 55–61.
4. Статистичний щорічник Херсонської області за 2015 рік / за ред. В. А. Вознюка. — Херсон : Головне управління статистики у Херсонській області, 2016. — 488 с.
5. Литвинова О. М. Аналіз факторів підвищення ефективності виробництва зерна в сільськогосподарських підприєм-

ствах Харківської області / О. М. Литвинова, В. В. Олійник // Вісник ХНАУ. Серія «Економічні науки» : зб. наук. пр. / Харк. нац. аграр. ун-т ім. В. В. Докучаєва. — 2013. — №7. — С. 135–144.

6. Христенко Г. М. Розвиток та напрями підвищення ефективності зернової галузі / Христенко Г. М. // Вісник НТУ «ХПІ». Серія : Актуальні проблеми управління та фінансово-господарської діяльності підприємства. — 2013. — №53 (1026). — С. 182–188.

References

1. Andriichuk, V. G. (2005). *Efektivnist diialnosti ahrarnykh pidpriemstv: teoriia, metodyka, analiz* [Efficiency of activity of agrarian enterprises: theory, methodology, analysis] (monograph, KNEU). Kyiv, KNEU (in Ukr.).
2. Holubkov, Y. V. (2015). *Orhanizatsiino-ekonomichni osnovy ahrarnoi polityky ta napriamy pidvyshchennia efektyvnosti ahrarnykh pidpriemstv* [Organizational-economic bases of agrarian policy and directions of increase of efficiency of agrarian enterprises]. *Visnyk KhNUU. Seriiia «Ekonomichni nauky»*, 3, 420–429 (in Ukr.).
3. Zaburanna, L. V. (2014). *Ekonomichna efektyvnist vyrobnytstva zerna ta shliakhy yii pidvyshchennia v silskohospodarskykh pidpriemstvakh* [Economic efficiency of grain production and ways of its increase in agricultural enterprises]. *Ekonomika APK*, 3, 55–61 (in Ukr.).
4. Vozniuk, V. A. (ed.) (2016). *Statystychnyi shchorichnyk Khersonskoi oblasti za 2015 rik* [Statistical yearbook of Kherson region for 2015]. Kherson, Main department of statistics in Kherson region (in Ukr.).
5. Lytvynova, O. M. (2013). *Analiz faktoriv pidvyshchennia efektyvnosti vyrobnytstva zerna v silskohospodarskykh pidpriemstvakh Kharkivskoi oblasti* [Analysis of the factors of increasing the efficiency of grain production in agricultural enterprises of the Kharkiv region]. *Visnyk KhNAU. Seriiia «Ekonomichni nauky»*, 7, 135–144 (in Ukr.).
6. Khrystencko, H. M. (2013). *Rozvytok ta napriamy pidvyshchennia efektyvnosti zernovoi haluzi* [Development and directions of increasing the efficiency of the grain industry]. *Visnyk NTU «KhPI». Seriiia: Aktualni problemy upravlinnia ta finansovo-hospodarskoi diialnosti pidpriemstva*, 53 (1026), 182–188 (in Ukr.).