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GRAIN PRICING IN UKRAINE: A CASE STUDY OF MALTED BARLEY

Abstract

The agrarian market participants operate in a changing market environment. Their activities are characterized by a high level of risk, in particular, price risk, which determines the likelihood of failure in achieving the planned results. The purpose of the paper is to analyze the dynamics of prices for malted barley and determine the main factors influencing the price of malted barley in the agricultural market of Ukraine. The theoretical and methodological basis of the study is the scientific works of domestic and foreign authors on the problems of pricing management. Methods of data analysis, synthesis, and generalization of results are used. As a result, one can notice a high level of price fluctuations, significant price fluctuations during the year, absence of a uniform inversely proportional effect between the volume of barley production and its purchasing prices, and presence of disparity between the selling price of barley and the production costs of grain producers. The key factors that determine the price of malted barley include market saturation, grain quality, production expenditures, conditions on the market of barley fodder, contractual relations (which are sufficiently standardized but do not protect agricultural producers from risks), public policy through regulation market. The study outlined recommendations regarding the need to improve the legal regulation of relations and the development of a system to ensure the functioning of the grain market, effective cost management, introduction of innovative agrotechnologies, and financial hedging instruments.

Keywords

agricultural production, malting barley, price, pricing,
market, government regulation, contractual relations

JEL Classification

L11, M11, Q11, Q13

INTRODUCTION

Agricultural production in Ukraine depends on the available resource and investment opportunities of territories, weather and climatic conditions, organizational and managerial capabilities of grain producers, market conditions, and other factors of influence.

The cultivation of malted barley as an area of production activity was intensively developed at the beginning of the century as a result of the formation of the raw material base of malt production in the brewing industry by joint efforts of malting corporations-investors and agricultural companies. Efficient production of malted barley was facilitated by a professional partnership of malt corporations with grain producers on the principles of mutually beneficial contractual relations with a guaranteed market and a pre-established level of purchasing prices with partial innovation, investment, and provision of technologies, advisory support, and quality control. Thus, during 2015–2019 the yield in farms cooperating with malting corporations increased by an average of 1.2 t/ha (from 3.9 to 5.1 t/ha), causing a level of profitability of about 60% while the total yield and profitability of barley in Ukraine amounted to 3.5 t/ha and 21%, respectively (State Statistic Service of Ukraine, n.d.). The cultivation of barley for brewing has be-

come attractive to agricultural producers and ended the problem of production of malt raw materials for the brewing industry in terms of both needs and quality requirements.

However, malt production is significantly dependent on the dynamics of the brewing industry, which copies the latter in its development leading to a sharp decline in malt production in recent years. In 2020 it decreased by 49% to 276 thousand tons against 541 thousand tons in 2008 (Ukrpyvo, n.d.). Another wave of decline in beer production halted the successful development in the production of malted barley, causing failures in the established mechanism of production relations between grain producers and malt corporations. The decrease in market demand negatively affected the volume of purchases and the level of selling prices. At the same time, weather caprices of certain years added to the troubles of grain producers, which led to a deterioration in the quality of harvest according to the customer requirements. For these reasons, grain producers are forced to sell a significant part of the harvest to breweries at the prices of grain fodder, which causes profit losses from 25 to 40 \$/t.

In addition, for the above reasons, in recent years, the disparity between the selling price and costs has become more noticeable; therefore, the share of profits for expanded production is significantly reduced. All this makes grain producers think about the feasibility of growing malting barley, revising the structure of cultivated areas, or leaving this business.

1. LITERATURE REVIEW

Researchers are actively studying the problems of pricing management in agricultural production. Colman and Young (1989), Barkley (2019), and Koester (2020) covered principles and methods of agribusiness formation, analysis of agricultural markets, forecasting the market behavior of agricultural producers, food, and agricultural policy.

Colman and Young (1989), analyzing the diverse situations in agricultural markets in developing countries based on the main components of the analysis of markets for agricultural production, consumption, and exchange, described the tools to study supply and demand. Deepening the theoretical foundations of market competition, monopoly, monopsony, oligopoly, and oligopsony, as well as their impact on the market price, they defined a set of properties of a perfectly competitive market or product, gave impetus to the more in-depth development of market demand theory, its functions and the degree of influence of the elasticity of demand on the price of goods. More pronounced fluctuations in prices were noted in agricultural markets, where demand is inelastic. In addition, agricultural products that are characterized by low and higher elasticity of demand were indicated and it was concluded that the elasticity of demand from changes in the price of malting barley is less than the price elasticity of barley fodder.

Barkley (2019) further developed the rationale for the theoretical foundations of the market functioning. The competitive market is determined based on homogeneous products, numerous buyers and sellers, freedom of entry and exit, ideal information. The structure of the market distinguishes it into a market of ideal competition and monopolistic competition. Regarding the malting barley market in Ukraine, there are unrecognized signs of monopoly on the part of malting companies, which are essentially the only consumer of this specific agricultural product, and it is not possible to enter the world markets due to low competitiveness in quality and price. Brewing barley has a much lower price elasticity compared to barley fodder, which reduces the flexibility of pricing.

Koester (2020) analyzed specific features of the agricultural market. The general framework for policy evaluation and economic analysis of the development of agricultural production in the EU can be applied to any country. Recommendations on the formation of prices for agricultural products provide the necessary knowledge to assess markets, analyze market prices in a competitive environment, the importance of marginal costs compared to average costs, determining the optimal size of production, the importance of transaction management.

The activity of agricultural companies is determined by many factors that can have a positive

impact on the performance of agribusiness entities (for example, favorable weather conditions, favorable market conditions, etc.) and bear risks and threats of various kinds. Dykha et al. (2019) proposed a method of risk assessment (investment, financial and operational) based on a matrix and expert approaches, modeled the impact of risks on the economic security of companies, and developed recommendations to neutralize the impact of risks that can be used by businesses, including grain producers. Kovačević and Jeločnik (2019) proposed tools for effective risk management in the EU.

The processes of pricing of agricultural production in Ukraine are influenced by the prices of agricultural products on world markets, the state of foreign trade, certain rules and regulations of customs, and non-tariff regulation of exports and imports in terms of types of activities. Dastagiri and Sindhuja (2021) described the basics of pricing policy in terms of trade interaction within the WTO and the creation of a value chain in the global pricing system.

Vavryk (2014) studied the economic environment of agricultural companies and substantiated the impact of the price factor on the development of agricultural enterprises. The influence of factors on the price of agricultural products was also studied by Tong (2012). Barylovykh (2017), Yatsiv and Yatsiv (2015), and Shkvyrva (2014) revealed the peculiarities of the pricing process in the market of agricultural products and substantiated the emergence of price disparities due to imbalances of supply and demand, the disparity between operating costs and selling prices.

Shpychak et al. (2017) substantiated a wide range of concepts regarding price and pricing process, described the methods and functions of pricing, factors, and features of pricing, the basics of price formation and pricing management. Plotnytska (2017) described conceptual approaches to pricing management in agricultural companies while Lupenko et al. (2013) focused on the peculiarities of the pricing process for organic products and factors that are characteristic of this segment of market production and pricing. Methodical recommendations on pricing for organic products were offered.

Lagi et al. (2015) proposed to form a pricing policy based on the study of the dynamics of food prices in the international market and based on the results of market prices' modeling under the influence of supply and demand.

The well-known European market expert Lamben (1996) repeatedly raised the issues of pricing management; in particular, describing strategic pricing decisions in the system of strategic marketing of companies. In addition, Lamben (2007) consistently and systematically scientifically substantiated marketing management approaches, marketing strategies for different product markets. The author departed from the traditional presentation of marketing activities as a complex of 4P (product, price, distribution, promotion) and analyzed in detail the levels of strategic and operational marketing. Different goals, methods, and strategies of pricing are described in detail; specific problem situations with access to marketing solutions regarding market pricing are identified.

Mykhailova et al. (2018) improved the mechanism of marketing management of grain producers through the proposed procedure to take into account seasonal price fluctuations and medium-term trends in setting selling prices for grain by agricultural companies based on the use of forecasting tools for management decisions in sales.

An effective way to manage the production of agricultural products is contract farming, which provides for the early setting of the purchasing price and purchasing volumes, determines the liquidity of the market, and stabilization of prices in it (Chen & Chen, 2021).

Dykha (2016) noted the importance of state regulation (according to the requirements, challenges of global realities, and modern demands) in achieving effective business results, the need for clear and transparent regulations, an effective system to influence processes, regulation of the interaction between market participants and creation of conditions for its proper functioning. In addition, the appropriate technical and technological level of production, the implementation of an effective investment and innovation strategy will ensure competitiveness (Dykha et al., 2017).

2. METHODS

The information base of the study is the statistical data of the State Statistic Service of Ukraine, the electronic trading system Agroxy, information analytic agency APK-Inform, performance indicators of agricultural companies, the results of observations and analysis. The theoretical and methodological basis is the scientific works of domestic and foreign authors on the problems of pricing management.

The paper uses the following methods: system analysis – in determining the development trends of the grain market (grain production, price dynamics); monographic – for in-depth study of the tasks, identifying causal links of the influence of factors on the price of malting barley; comparative analysis – to study price fluctuations in the grain market; computational and abstract-logical – for the theoretical generalization of research results and formulation of conclusions and proposals.

3. RESULTS

The prices of agricultural products are determined based on market interaction and cooperation between market participants (i.e., agricultural producers, processors, exporters, trading companies, intermediaries, carriers, warehouse owners, suppliers of material and technical resources, etc.) throughout the marketing year (MY) under the influence of factors of internal and external environments, market conditions, forces of nature, weather conditions, seasonality of production, etc. The adjustment of prices to market conditions to some extent affects the level of profitability and competitiveness of grain products.

The marketing year in agricultural production begins with the month in which a particular type of crop product begins to be delivered (sold) and ends on the last day of the month preceding the month in which it begins to be delivered (sold) (for malting barley the marketing year is from July 1 to June 30).

The price of barley in Ukraine is determined by the main pricing components: current yields, market conditions, the dynamics of world demand and

exports, competition with other cereals and processed products, the dynamics of domestic prices for basic consumers. It also depends on many market participants. First of all, the price depends on grain producers with the corresponding consumer offer (according to such indicators as the quality of the grain, the size of batches of grain for sale, conditions of delivery and transportation, etc.), on grain traders (what agreements with producers grain traders reach concerning grain prices), and on the state (as described below).

The analysis of price dynamics in recent years in the agricultural sector shows that it remains volatile for all types of agricultural products, particularly, for barley. This was especially noticeable in the dynamics of market changes during 2019–2020 MY, when prices of wheat fell by 11%, corn – by 8%, barley – by 18% compared to the previous 2018–2019 MP (APK-Inform, n.d.). In 2020–2021 MY, on the contrary, a sharp rise in prices is observed: wheat – by 41%, corn – 66%, barley – 47%. Comparing the highest price of barley – 260 USD per ton in February–March (2020–2021 MY) and the lowest 139 USD per ton – in January (2016–2017 MY), price fluctuations over the past five years reached more than 100 USD per ton (Table 1).

Table 1. Dynamics of barley prices in 2016–2021 MY, USD per ton

Source: Agroxy (n.d.), APK-Inform (n.d.).

Months	16/17 MY	17/18 MY	18/19 MY	19/20 MY	20/21 MY	Average
VII	143	149	195	187	179	171
VIII	149	166	224	174	186	180
IX	143	170	226	169	198	181
X	145	175	235	176	216	189
XI	144	185	235	168	224	191
XII	144	188	234	177	223	193
I	139	185	228	170	246	194
II	150	193	234	180	260	203
III	152	201	218	163	255	198
IV	156	207	218	176	233	198
V	159	208	203	174	255	200
VI	155	192	193	163	244	189

The formation of the purchasing price is undoubtedly influenced by the volume of production and, accordingly, market saturation. With increasing production, the price tends to fall and, as a rule, it grows with decreasing production. However, there is no clear proportionality of the influence (corre-

lation) between the indicators: in some years, this dependence was minimal or, conversely, significant under the influence of global market conditions. A striking example of these phenomena is the studied dynamics of barley production and its purchasing prices for the period 2016–2020 (Table 2).

Table 2. Dynamics of barley production and its purchasing prices in 2016–2021 MY, in % to the previous year

Source: State Statistic Service of Ukraine (n.d.), Agroxy (n.d.), APK-Inform (n.d.).

Marketing year	16/17 MY	17/18 MY	18/19 MY	19/20 MY	20/21 MY
Production of barley	114%	88%	89%	123%	86%
Barley fodder class 3 price	99%	125%	119%	79%	131%

Purchasing prices in the study period have a more noticeable amplitude of instability fluctuations in the range of 52% (from 79% to 131%), while changes in production due to the reduction in cultivated areas and adverse weather conditions were only 37%. The year 2019 was significantly inefficient for the production of barley with a level of profitability – 2.3%. The sharp decline in the profitability of barley production in 2019 can be explained only by the disparity between the selling price and production costs of farmers, which doubled from 1685 UAH/t in 2016 to 3378 UAH/t in 2019 (State Statistic Service of Ukraine, n.d.; Agroxy, n.d.; APK-Inform, n.d.).

In addition, the market experiences significant fluctuations in price dynamics throughout the year. In some years, the difference in prices within the year reached 40–45%, as it was in 2017–2018 MY and 2020–2021 MY (Table 3).

Table 3. Barley price fluctuations in 2016–2021 MY, USD per ton

Source: Agroxy (n.d.), APK-Inform (n.d.).

Price level	16/17 MY	17/18 MY	18/19 MY	19/20 MY	20/21 MY
Maximum	159	208	235	187	260
Minimal	139	149	193	163	179
Max/min, USD/t	20	59	42	24	81
Max/min, %	14%	40%	22%	15%	45%

For grain producers, such fluctuations are quite significant, because the selling price forms the economic efficiency of companies. The final result

of the activity – profitability – depends on how the agricultural producer is adjusted to the market situation, how flexibly he is able to use this information to his advantage and organize the sales of grain products.

The national market for malted barley is formed by three leading companies: Soufflet, Malteurop, and Obolon with market shares from 25 to 40% competing with each other and fighting for the raw materials market. Each of them has a well-established market for selling malt produced by them in Ukraine and abroad. There is competition between manufacturers/suppliers, as the consumer is not limited in the choice of supplier. The territorial boundaries of the commodity markets for most of the malted barley are the national markets of Ukraine. That is, in the framework of this activity there is a vertical concentration in the barley markets. The market of malting barley in Ukraine is estimated at 700–800 thousand tons, about 10% of total production and 16% of exports.

The needs of Ukrainian malt companies are met by about 70% due to the existing, so-called “certified programs” from malt companies and 30% from the “free market”. The essence of the “certified program” is the cultivation of malted barley by agricultural companies on a contractual basis with seeds provided by the malting company, with its partial technological support, advisory support, and quality control in the process of harvesting, cleaning, batch formation, and selling. Buying on the “free market” (i.e., malted barley grown from seeds of one’s choice, according to one’s technologies) is carried out after thorough inspections of varietal purity and often at a price several percent lower than in the “certified program”.

Contractual relations between the grain producer and companies of the malt industry form the market of malted barley in Ukraine. State regulation of the market on the quality of grain products is regulated in part by the current State standards of Ukraine and, to a greater extent, the requirements of contractual specifications of malt companies. The modern contractual relations between malt companies and producers of malted barley are in essence a unique type of production and market relations; the contract of direct deliveries of product – malting barley – defines the following:

- the area of cultivation of barley and the specified variety;
- consultative support and control of observance of technological processes in the cultivation of crops by the agricultural company;
- requirements to grain quality following the State standards of Ukraine, malt production specifications, and food safety indicators;
- the volume of grain supply, compared with the jointly calculated biological harvest, terms and procedures of deliveries;
- predetermined price taking into account the price situation on the market of barley fodder.

The price of barley is formed by the main consumers, as well as the global marketing channels. The price of malted barley on the domestic market is formed without intermediaries, in full dependence on the price of barley fodder with slight adjustments in export trends.

The price of malted barley during the last fifteen years is formed by the agreement between the grain producer and the malt producer according to the formula $P = PFB + 20\%$, where: P is the price of malted barley; PFB – the price of barley fodder. This price is valid only if the requirements of the quality contract agreement are met. A variety of levers of influence are used in the struggle for quality. For example, in the case of minor discrepancies in indicators such as size (fine grain and grain impurity), discounts/rebates are used in the purchasing price from 0.05 to 0.1% for every 0.1% of deterioration/deviation from the norm. The barley grain for the brewing industry with quality indicators below the basic ones, i.e. with a protein content below 9% and above 11.5%, the size in the range: $\leq 90 \geq 85\%$ can be purchased by a malt company only in exceptional cases and in very limited quantities with a corresponding decrease in prices. Grain with genetic varietal purity < 93%, viability < 97%, admixture of sunflower seeds is not purchased at all.

The analysis of activities of companies focused on the cultivation of malted barley shows the profitability of this area of activities, which contributes

to their involvement in cooperation with malt companies in the brewing industry. However, in some years with unfavorable weather conditions, a significant part of the barley harvest allocated for breweries is not bought by malt companies due to unsatisfactory quality; accordingly, the costs of its production become disproportionate to profits. The deterioration of quality against the established requirements and the situation on the barley fodder market are the main reasons for inconsistency in the relationship between the parties in the formation of the final price for malted barley.

The difference between the price declared in the contracts and the actual price for the period 2016–2021 MY is evidenced by the dynamics of prices for fodder and malted barley; prices are presented in US dollars for the convenience of estimation (Table 4).

Table 4. Dynamics of purchasing prices of fodder and malted barley in 2016–2021 MY, \$.

Source: Agroxy (n.d.), APK-Inform (n.d.).

Marketing year	16/17 MY	17/18 MY	18/19 MY	19/20 MY	20/21 MY
Barley fodder class 3	148	185	220	173	198
Barley (for malt)	164	208	258	206	216
Difference, USD per ton	16	23	38	32	18
Difference, %	10%	11%	15%	16%	4%

The gap in purchasing prices between malt and barley fodder in the studied years ranged from 4 to 16%. In fact, the producers of malted barley lost from 4% (in 2019–2020 MY) to 16% (in 2020–2021 MY) in prices due to indirect influence of the external market, lower grain quality due to adverse weather conditions, market saturation from incomplete use of the malt producer’s capacities, and its marketing shortcomings.

According to the data of 2020, the dependence of purchasing prices between the malt barley fodder in the context of the regions is from 3 to 7% and does not significantly affect the efficiency of barley production. For example, as of August 3, 2020, on the terms of Elevator EXW it was 5,145 UAH/t in Sumy oblast, in Kharkiv – 5,161, Chernihiv – 5,212, Ternopil – 5,207, Khmelnytskyi – 5,300, Vinnytsia – 5,325, Kyiv – 5,350 UAH/t (Agroxy, n.d.; APK-Inform, n.d.; Trypoli, n.d.).

Table 5. Indicators of malted barley production by agricultural companies depending on the level of the selling price of barley

Source: Authors' compilation.

Production expenditures, UAH/ha	13,860					
Production costs	2,772					
Full cost	2,932					
Crop yield, t/ha	5.0					
Product marketability, %	85%					
Selling price of malted barley, UAH/t without VAT	4,000	4,200	4,400	4,600	4,800	5,000
% to the price of barley fodder	0%	+5%	+10%	+15%	+20%	+25%
Gross revenue from 1 ha, UAH without VAT	19,079	19,929	20,779	21,629	22,479	23,329
Profit, UAH/ha	4,419	5,269	6,119	6,969	7,819	8,669
Profitability, %	30%	36%	42%	48%	53%	59%

To better understand the impact of prices on the efficiency of malted barley production, we add the main indicators of its cultivation in farms with a sufficient level of resource provision and yields of 5 t/ha at different selling prices of malted barley in 2020 MY (Table 5).

The data of Table 5 show that in practice the pricing of malted barley with the declared so-called premium for the brewing grain quality of 20% to the price of barley fodder has no stimulating role, but only compensates for additional costs that the grain grower has to bear to ensure the required quality of malted barley.

The cultivation of high-quality malted barley, in comparison with barley fodder, requires additional expenditures for seeds of the variety declared by contractual conditions (usually 1-2 reproductions); the use of the balanced NPK, microelements, and nutrition growth regulators; mandatory second fungicidal treatment of crops against fusarium and additional application of herbicides to control sunflower blight; post-harvest processing of grain with calibration, pre-sale batch formation, compliance with storage and transportation regulations. In total, the above-mentioned additional costs can take more than 10% of the declared premium. However, they are technological-

ly mandatory and play a crucial role in obtaining high-quality grain according to the requirements of breweries.

The modern market of agricultural products, its rules and trends require a clearly defined marketing strategy from the agricultural producer. On the market of malted barley, the issue of delimitation of optimal terms of selling during the marketing year becomes extremely important. The analysis of price changes for the period 2016–2021 shows that the highest figure during the year is reached in February (203 USD per ton), (Table 6), which allows the grain producer to sell barley at the peak price to earn additional 20-25 USD per ton compared to its selling immediately after harvesting.

However, as calculations and practice show, opportunities to earn the additional 20-25 USD per ton by optimizing the selling period are largely surpassed by the costs of storing barley during the same period (Table 6).

At the same time, according to the analytics for 2016–2021, malt companies bought almost 90% of malted barley in August–October, when the barley price index is lower than the average annual one (Table 1). It should be noted that in the agreements between agricultural companies and malt produc-

Table 6. Dynamics of barley prices and the cost of grain storage services during the marketing year, USD per ton

Source: Agroxy (n.d.), APK-Inform (n.d.), Trypoli (n.d.).

Months	VII	VIII	IX	X	XI	XII	I	II	III	IV	V	VI
The average price of barley is 16/21 MY	171	180	181	189	191	193	194	203	199	198	199	189
The difference between the average price and the price during the period of mass sales	-12	-3	-2	6	8	10	11	20	16	15	16	6
The cost of grain elevator	1	3	4	6	8	10	12	14	16	18	20	22

ers the deadline for deliveries (sales) of malted barley is stipulated for September 15.

In addition, the delay of sales to a later date, unfortunately, is not possible due to the lack of sufficient storage spaces in most companies or improper technical condition of the existing ones, which does not provide conditions for long-term and specific storage requirements. The main argument that forces grain growers to sell malted barley immediately after harvest is the lack of working capital to continue harvesting other crops and complete the autumn works. Barley is the fastest turnover of capital compared to other cereals. That is, the benefits from later barley sales are not always commensurate.

Financially stable agricultural companies, sufficiently provided with working capital, with modern warehouses with proper ventilation should definitely postpone the sale to a later and more profitable period in December–March of the marketing year.

The activities of participants of any market are influenced by public policies in the relevant field through the existing mechanisms of state regulation. In particular, to some extent on the agricultural market, the state regulates the export of grain and can intensify, weaken or stop it. Changes in the saturation of the domestic market change prices accordingly. During the last two decades, different state policies have been applied to the grain market of Ukraine. For example, during 2001–2002 grain exports were carried out without any restrictions. This led to the need to import 3 million tons of wheat in 2003–2004 MY. After the period of a free market in 2006, a complete export ban was introduced, which led to the downtime of dozens of ships in the ports of Ukraine and significant losses for manufacturers and exporters. Following Ukraine's accession to the WTO in 2008, approaches to market intervention in general and regulatory rules, in particular, were revised. In 2010, quotas were used as a mechanism to regulate exports. In 2011–2012, changes were made to the state regulation of exports and the practice of signing memoranda on the coordination of grain exports during the season was introduced.

On the domestic market, the main state institutions are the Agrarian Fund and the State Food

and Grain Corporation of Ukraine. The Agrarian Fund is responsible for purchasing grain and selling flour to meet domestic demand (most grain is purchased through forwarding contracts). Each year the fund purchases up to 1 million tons of grain, including wheat, corn, barley, rye, buckwheat, oat, and pea. The State Food and Grain Corporation of Ukraine is engaged in the storage, processing, transshipment, and export of grain. In the last years, the State Food and Grain Corporation of Ukraine has been one of the largest exporters of grain and flour in Ukraine. The corporation practices various forms of cooperation with agricultural producers: regular procurement, forward contracts, supply of material resources, provision of logistics, and collection services.

Agricultural production in Ukraine is characterized by small amounts of direct state support. The special/preferential VAT payment regime was abolished in Ukraine in January 2017. The financial support for businesses through the mechanism of cheaper loans and compensation of lease payments is to compensate part of the payments (interest) on bank loans. The government reimburses 25% of the cost of machinery purchased by farmers.

To create proper conditions for the functioning of the agricultural market, state policy should be aimed at improving the legal regulation of market participants and ensuring the functioning of the grain market through the development of institutional, infrastructural, financial, etc. systems.

To increase the efficiency of agricultural producers, ensuring their competitiveness will definitely reduce the cost of production through scientifically sound cost savings and simultaneously increase the productivity per area through the introduction of effective cultivation technologies and widespread implementation of integrated product quality management systems. The grain producer has to resist the negative influence of natural and climatic factors by efficient use of its resource and production potential, application of modern innovative technologies, promising high-yielding grain varieties of domestic and foreign selection, adapted to specific conditions of economic activity.

CONCLUSION

The state and dynamics of prices for malted barley are analyzed, the main factors influencing the price of malting barley are determined, and recommendations for improving the functioning of the agricultural market of Ukraine are outlined.

The results of the analysis of barley prices show significant price fluctuations both during the last five years of the study (more than 100 USD per ton) and during the months of the year (in some years the difference in prices within the year reached 40-45%). The price of malted barley is influenced by production volumes (volumes of sown areas), market saturation, weather conditions (which largely determine the quality), production costs of agricultural producers, the situation on the market of barley fodder as a base in the formation of malted barley prices, contractual relations between grain producers and malt companies, state policy implemented through export regulation. On the domestic market, the price depends on public procurement, direct state support, which is insignificant in Ukraine, financial support mechanisms due to cheaper loans, and compensation of lease payments.

As agricultural market participants operate in a changing market environment, in order to eliminate contradictions and balance the demands of agricultural market participants in the pricing management system (growing technological costs of grain growers, which are not properly perceived by malt companies; in addition, the latter, as monopolists, apply “pressure” to reduce purchasing prices for malted barley, risks of non-compliance of grain quality of agricultural producers with the requirements of malt companies (size, protein content, etc.), to increase the efficiency of agricultural producers, to increase their competitiveness, it is advisable to:

- at the state level: to create appropriate conditions for the functioning of the agricultural market by improving the legal regulation of participants (in particular, to adopt clear and transparent legislation regulating the organization and trade of commodity derivatives in Ukraine) and ensure the effectiveness of institutional, infrastructural, financial and other systems;
- for grain producers: to effectively manage costs, increase productivity per area through the introduction of effective cultivation technologies, high-yielding varieties of domestic and foreign selection, operate under integrated product quality management systems, and use financial hedging tools in price risk management, which will be the subject of further research.

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