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## Competitiveness of products of agricultural enterprise in the context of informational support

**Scientific problem.** Problem of increasing the competitiveness for agriculture in Ukraine is very important because agricultural producers in many cases remain dissatisfied with the prices of crop and livestock production, they are also not satisfied with the amount of subsidized government support and unreliable partners. Therefore, at the present stage of managing one of the most important objectives of sustainable economic development of domestic agricultural enterprise is increasing the production efficiency of agricultural enterprises and strengthening the competitiveness level of their products in the domestic and foreign market. The solution of this problem was particularly emphasized with the integration of Ukraine into the World Trade Organization (WTO), which requires achievement a high level of competitiveness of agricultural products and the ability in proper time to respond to changes in the competitive environment. Such important aspects of providing the competitiveness, as strategy formation, organization of effective management of competitive advantages, evaluation and implementation of the strategic potential are still not fully used in the practice of management of agricultural enterprises. At the same time the vast majority of agrarian formations because of the low level of informational support of competitiveness indicators are faced with the high level of competition from the side of foreign agricultural enterprises.

In the future, the level of competition will only grow as the ability to gain a competitive advantage with the use of modern system of

informational and consultation support of agricultural production. It is one of the important factors of effective operation of domestic agrarian formations in the varying market environment.

**Analysis of recent researches and publications.** Significant contribution to the theoretical and practical developments for determining the level of competitiveness of agricultural products subjects of agricultural enterprise made by such local scientists as O.D. Hudzynskyy [3], S.M. Kvasha [5], D.G. Legeza [7], M.I. Malik [9], A.A. Shkolny [12] and others. As for informational support of the agricultural sector of Ukraine's economy, it is necessary to note the scientific research as M.F. Kropyvko [7], V.V. Klochan [6], G.S. Ivanova [4], O.V. Ulianchenko [11] and others.

At the same time with the dynamic changes in the conditions of modern market environment requires in-depth study of the issue in development and improvement of the mechanism of the informational support of management competitiveness of local agricultural products, which causes the actuality and the need in further researches in this direction.

**The objective of the article** is to determine the relative competitive advantages of the native agricultural production and processing scientific and practical recommendations for the development of the mechanism of the informational support of management competitiveness of subjects of agrarian enterprise to create favorable preconditions for realization their products on the domestic and foreign markets.

**Statement of the main results of the research.** A characteristic feature of modern so-

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ciety is the growing influence of informational and communicational technology in all spheres of life and human activity. Information and innovations, based on the using new ideas and intellectual society resources transform into the main source of the growth of economic and social potential of some countries, regions, industries and enterprises, and the development of society – increasingly becomes dependent on the informational and consultation support of branch of economy. As for Ukraine, the scientific and practical activities in the branch of informational and consultation support of agrarian sector are carried out in the context of global trends. That's why the major problems of the formation and functioning of the national system of informational and consultation support of agrarian sphere are similar foreign, namely – to be a catalyst for scientific and technological progress in agriculture, promote new knowledge in the implementation of the agricultural production of modern science, engineering and technology, to provide both an economic entities and individual entrepreneurs with the necessary consulting services on topical issues of agricultural economics, organization, management and marketing, development of the social sphere.

It is generally accepted today that the main task of agrarian formations are competitive and quality products which answer the requirements national and international standards. In the context of this very important for domestic economic entities is to study the competitors to compare own advantages in the struggle for markets.

In the scientific literature there are different interpretations of economic competitiveness categories. Usually a competitive product on the international market – a commodity that is on the set of their cost and quality properties accommodate the specific needs of a particular segment of consumers in the foreign market [2, c. 278].

Researches of the competitiveness of agricultural products of agrarian formations in the condition of uncertainty and risks of market environment make it possible to evaluate it as a complex characteristic of potential opportunities to secure competitive advantages in the future. It is known that the competitiveness of

agricultural products has not only internal, but also external aspect, since some of the products are exported. Consequently agrarian formations should have credible and reliable informational support of competitive environment in the production and marketing of agricultural products.

Competitiveness of agricultural products is a value, which gradually changes with the time. Thus, the higher the initial level of competitiveness of agricultural products, the greater will be the volume of sales and the longer the period of its existence in the agricultural market. Such indicators as market share, export volumes not enough reflect the competitive features of both agricultural sector and certain agricultural products.

Therefore, in order to assess level of competitiveness of domestic agricultural products on the international market the relative export advantage index was calculated (formula 1) [5, 13, 14, 15].

$$RXA_{ij} = (X_{ij} / \sum_{l, l \neq j} X_{il}) / (\sum_{k, k \neq i} X_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} X_{kl}), \quad (1)$$

where  $X$  – exports;  $i$  and  $k$  – products;  $j$  and  $l$  – country.

If the value of the index is greater than 1, the country has a comparative advantage in relation to the export of this type of agricultural production. In cases where the  $RXA < 1$  it indicates a competitive disadvantage.

Relative import penetration index is proposed to calculate by formula 2. It is similar to the index  $RXA$ , but in this case is taken into account imports, indicated by  $M$  [5, 13, 14, 15]:

$$RMP_{ij} = (M_{ij} / \sum_{l, l \neq j} M_{il}) / (\sum_{k, k \neq i} M_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} M_{kl}). \quad (2)$$

If the index  $RMP$  greater than 1, the dependence on imported products is high. Where the value is less than 1, it reached a comparative competitive advantage. It should be noted that due to the introduction of import and export duties these indices may not exactly reflect the true competitive advantage in the marketplace. It is therefore advisable to determine the index of relative trade advantages  $RTA$ , which takes into account both the value of exports and imports of a certain product, formula 3 [5, 13, 14, 15].

$$RTA_{ij} = RXA_{ij} - RMP_{ij}. \quad (3)$$

As the comparative advantages of agricultural products are not a static measure, we have

analyzed the dynamics of their change. Research conducted over the period from 2000 to 2011 that allowed revealing the corresponding trends in terms of foreign economic strategy of domestic agricultural producers.

The conducted analysis showed that among of grain products the most competitive advantages has barley, index of RTA over the last year were at the level 19-50. Such high index is explained by the large volumes of barley export from Ukraine. Indexes RXA and RTA wheat and maize indicate of their competitive advan-

tages, although they vary considerably during the study period (Table).

During the analysis determined that the cause of this is the change in export volumes of these products in various marketing years. Thus, Ukraine does not have sustainable «position» on the world market wheat and corn, and the competitiveness of its products is largely dependent on conjuncture of external markets. But in spite of this Ukrainian grain products have significant competitive advantage in foreign markets.

#### Evaluation of the level of competitiveness of domestic agricultural products in foreign markets \*

Indexes	Years	Agricultural products					
		Wheat	Barley	Maize	Milk (skimmed dried)	Meat (beef and veal)	Meat chicken (canned)
Relative Export Advantage Index RXA <sub>ij</sub>	2000	0,80	13,35	1,29	10,42	2,27	0,01
	2006	12,68	46,94	5,83	12,80	0,06	0,20
	2007	1,75	19,30	2,36	9,48	0,01	0,03
	2008	8,67	43,52	5,94	4,94	0,01	0,03
	2009	17,8	50,05	15,80	3,41	0,01	0,02
	2010	6,89	41,39	6,52	1,40	0,01	0,03
	2011	5,98	19,64	15,43	2,54	0,01	0,05
Relative Import Penetration Index RMP <sub>ij</sub>	2000	3,06	0,94	3,66	0,01	0,01	0,19
	2006	0,02	0,40	1,57	0,07	0,43	1,02
	2007	0,01	0,12	0,50	0,01	0,32	0,85
	2008	0,01	0,04	0,62	0,03	0,18	0,41
	2009	0,01	0,01	0,75	0,05	0,11	0,58
	2010	0,01	0,01	0,89	0,04	0,21	0,40
	2011	0,01	0,66	1,04	0,17	0,10	0,14
Relative Trade Advantage Index RTA <sub>ij</sub>	2000	-2,26	12,41	-2,37	10,41	2,26	-0,19
	2006	12,66	46,54	4,26	12,74	-0,37	-0,81
	2007	1,74	19,19	1,86	9,47	-0,31	-0,83
	2008	8,67	43,48	5,32	4,91	-0,17	-0,38
	2009	17,84	50,04	15,09	3,36	-0,10	-0,55
	2010	6,85	41,38	5,63	1,36	-0,20	-0,37
	2011	5,97	18,98	14,03	2,37	-0,10	-0,09

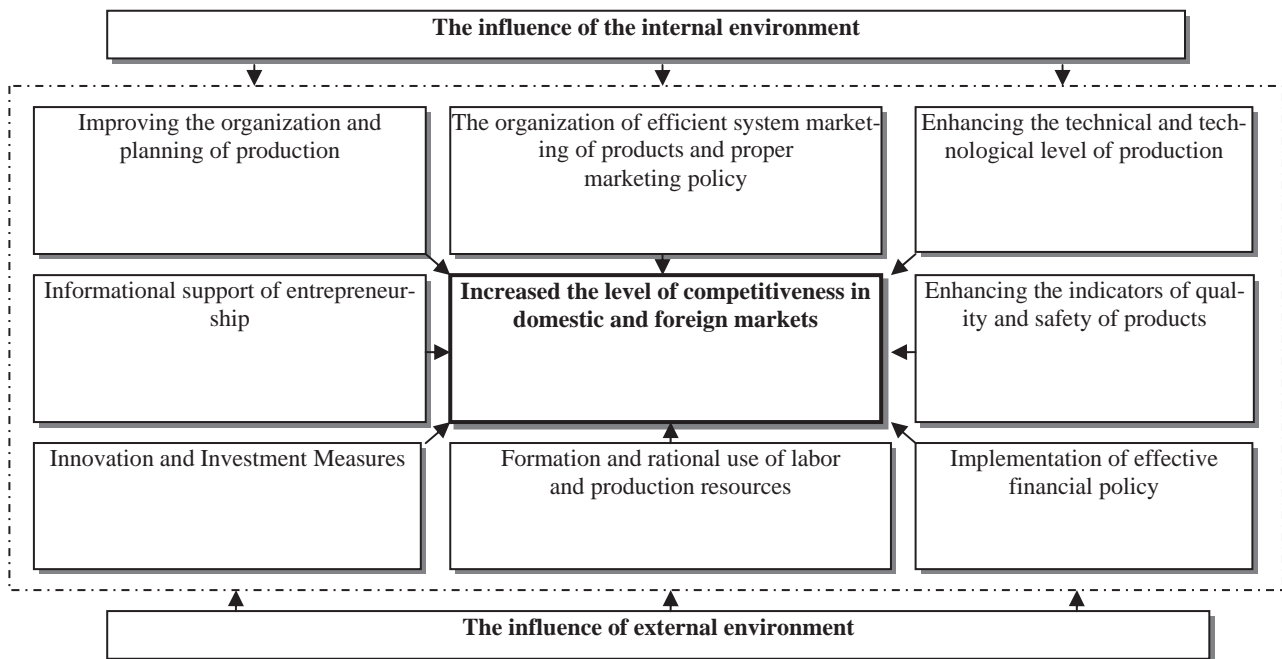
\* Calculated by the authors according to the data of the Food and Agriculture Organization FAO [10].

Unlike the grain products, negative situation is observed relative to the competitiveness of livestock products. Thus, during the analyzed period the index of relative trade advantages of milk reduced from 10,41 in 2000 to 2,37 in 2011. Noted above is the result of reduction of export competitiveness (index of RXA decreased to 2,54) and increased dependence on imports.

Thus, for the analyzed period of time the dairy products consistently are losing competitive advantages on the foreign agricultural markets. Positive competitive advantages of meat (beef and veal) and chicken meat (canned) relatively exports are almost close to negative in relation to imports. As a result during the ana-

lyzed period their indexes of RTA had a negative value, indicating a loss of competitive advantage in the market of meat products.

The wide production experience and conducted researches show that for the effective operation of agricultural units, it is necessary to use an appropriate mechanism for managing the competitiveness of agricultural enterprises whose constituents shown in Figure 1. This mechanism reflects the effective interaction of organizational, economic and technical-technological factors of management. This provides improved quality of domestic agricultural production and enhances its competitiveness in domestic and foreign markets.



**Figure 1. The components of mechanism of management competitiveness of agricultural enterprises \***

\*Own development of authors.

Implementing of proposed mechanism the agricultural enterprises to implement its objectives should first of all to improve the organization of production, intensely involve innovation and information technology in the production process, and implement retraining of personnel according to modern information technology and efficient use of the limited available production resources.

Particularly important role belongs of creating in the enterprise an effective information system, as it is crucial for the strategic vector of development of agricultural enterprise in conditions of market uncertainty and risk.

It is known that the main purpose of the system of informational support of management competitiveness of the agricultural entrepreneurship is a timely acquisition, analysis and transformation of the input data stream so that the leadership was able to make effective decisions, and the enterprise has successfully developed and strengthening their competitive advantages [1].

To determine the competitiveness of agricultural products is used the following indicators: production costs (cost of production), regulatory parameters, price of product and quality.

It is well known that every agricultural commodity producer is trying to reduce produc-

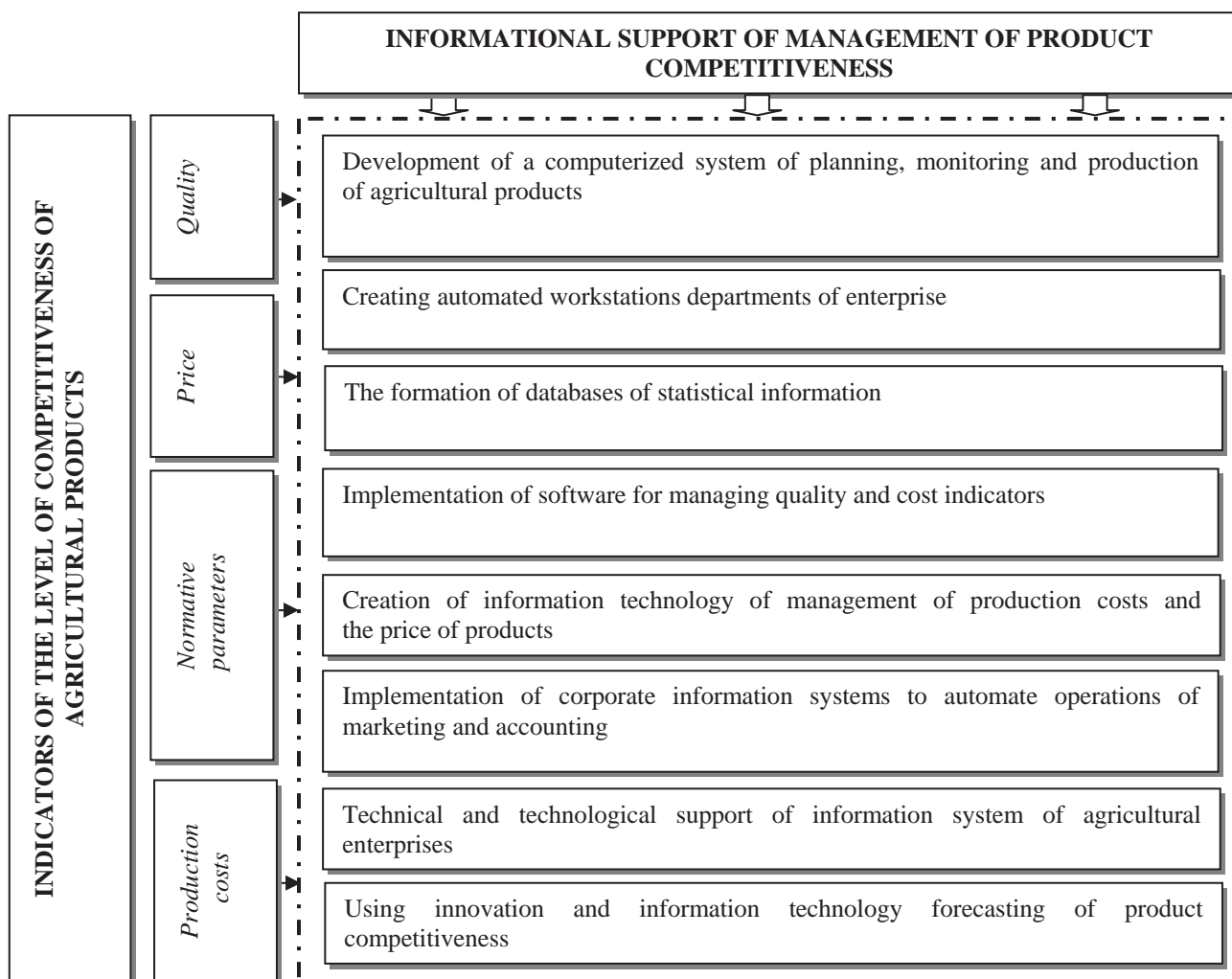
tion costs. This requires both improvements of production processes as well as introduction of new innovation and information technology. To achieve and maintain a high level of competitiveness of its products agrarian formations must have sufficient information on the state and dynamics of domestic and foreign markets. They must also systemize the information about potential competitors on the main areas of industrial and economic activities, conduct timely analysis, evaluation and forecasting cost and quality features of similar products of competitors and try to outrun them in innovative development.

Nowadays feature of domestic agricultural producers is insufficient price competitiveness of almost all agricultural products. This is caused by several reasons. First, the decrease in the level of energy supply of branch, physical and moral depreciation means of production. Also necessary condition is improving product quality, which is reflected in the biological, functional and environmental properties of certain products. A significant number of products are also lost because of the limited of agricultural producers in sufficient quantities of fuels and lubricants, spare parts, and also the necessary vehicles. The result of it, due to low level

of production intensification the expenses per unit of output is increased.

In order to provide favorable conditions for the export of agricultural products should take into account the fact that among its species higher competitiveness is the one that provides the greatest beneficial effect in relation to the total cost of a final consumer.

In view of the above to improve the competitiveness of domestic agricultural products and satisfying of consumer demand the authors have developed and proposed for practical implementation of an appropriate mechanism (Figure 2).



**Figure 2. Informational support of management competitiveness of agricultural products\***

\*Own development of authors.

The basis of mechanism is shown in Fig. 2 put the system of appropriate (organizational, economic, management and technical-technological) factors whose synergistic interaction of which should provide agricultural enterprises not only a competitive advantage but also profitability management.

Conclusions. To evaluate the competitiveness of domestic agricultural products on external markets the relative export advantage and

relative import penetration index have been defined by authors. The result of research was found that among the grain products a most competitive advantage have the following crops as wheat, corn and barley. The mechanisms of informational support of management competitiveness product of the agricultural enterprise reflecting the effective interaction of organizational, economic, technical and technological factors were developed.

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## Новини АПК

### Галузь тваринництва в сільськогосподарських підприємствах Київської області за I півріччя 2014 року

За січень-червень 2014 року підприємства агропромислового комплексу Київської області завдяки високому рівню виробництва продукції тваринництва досягли таких показників:

станом на 01.07.2014 р. поголів'я великої рогатої худоби становило 91,4 тис. гол., у т. ч. 37,1 тис. корів. Поголів'я свиней, порівняно з початком року, збільшилося на 14 тис. гол. і становило 352 тис. гол., завдяки чому підприємства Київщини посіли 3-тє місце по Україні;

поголів'я овець і кіз за перше півріччя збільшилося на 200 гол. і становило 5,4 тис. гол.;

за обсягами виробництва м'яса підприємства області вийшли на 4-е місце серед інших регіонів держави – реалізовано на забій худоби та птиці у живій масі 117,7 тис. т;

обсяг виробництва молока в сільгосппідприємствах порівняно з відповідним періодом минулого року збільшився на 3% і становить 110,3 тис. т. Середній надій у розрахунку на одну корову – 3072 кг молока, що на 128 кг більше проти відповідного періоду минулого року. Завдяки збільшенню продуктивності молочного стада підприємства області посіли 2-е місце в Україні;

поголів'я птиці зросло до 21 млн гол. (+1,3 млн гол. до минулого року), одержано 1123,2 млн шт. яєць. За кількістю поголів'я птиці та обсягами виробництва яєць підприємства області займають 1-е місце в державі.

Прес-служба Київської облдержадміністрації