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DEVELOPMENT OF ACTIVITIES FOR INCREASING COMPETITIVENESS OF AGRICULTURAL ENTERPRISES

***Abstraction.** Agriculture is the priority sector of the economy. Therefore, the current acute and urgent problem of effective functioning in agrosphere is the search for ensuring the competitiveness of agricultural enterprises. One of them is the introduction of innovative land cultivation technology.*

***Keywords:** competitiveness, agrarian sector, agriculture, No-Till, Mini-Till.*

***Анотація.** Сільське господарство є однією із пріоритетних галузей національної економіки. Тому, сучасною найгострішою і актуальною проблемою ефективного функціонування агросфери є пошук забезпечення конкурентоспроможності сільськогосподарських підприємств. Одним із них є впровадження інноваційної технології обробки землі.*

***Ключові слова:** конкурентоспроможність, аграрний сектор, сільське господарство, No-Till, Mini-Till.*

***Аннотация.** Сельское хозяйство является одной из приоритетных отраслей экономики. Поэтому, современной острой и актуальной проблемой эффективного функционирования агросферы является поиск обеспечения конкурентоспособности сельскохозяйственных предприятий. Одним из них является внедрение инновационной технологии обработки земли.*

Ключевые слова: конкурентоспособность, аграрный сектор, сельское хозяйство, No-Till, Mini-Till.

Increasing the competitiveness in agrarian sector of the Ukrainian economy is a strategic problem. It is impossible to achieve sustainable development of the agricultural sector without ensuring the competitiveness and sustainability in agricultural enterprises and food products in regional and international markets. Competition reveals the potential of the subjects of the agrarian market and performs an important function of a constant engine for the development of agricultural production.

A technological sphere is considered as a significant reason for increasing the productivity in agribusiness, especially with elements of innovative developments. To achieve this result, it is necessary to introduce a technology that would not only influence positively on production, but would also provide environmental benefits for long-term support of groundwater and water resources. Therefore, the work describes technologies that not only increase the efficiency of land use, but also contributes to the restoration of soils.

Problems of competitiveness of the national economy and factors in its formation were studied by Nuzhna O.A, Malik N.I, Pugach A.M, Zubets M.V, Myasnikovich M.V, S. John Baker, Kate E. Sexton, V. (Bill) G. Ritchie.

For the first time, the concept of "competitiveness" was introduced in the late 1970's by M. Porter. In his opinion, competitiveness is the ability of a product, a service, a subject of market relations to act on the market in the same way as similar goods, services or competing subjects presented there.

The concept of competitiveness of agrarian enterprises is much more complicated and can be explained differently. The concept of competitiveness of agricultural enterprises is sufficiently completed and systematically disclosed by M. Malik and A. Nuzhna. In their opinion, this is the ability of the subjects of economic activity in the agrarian sphere to adapt to the new economic conditions and use their competitive advantages to win the competition in the markets of

agricultural products and services, also to make the most efficient use of land resources, satisfy the buyer's needs as fully as possible by analyzing the market structure and flexibility in changing of conjuncture [1]. However, ensuring the competitiveness of agricultural enterprises doesn't consist only in land resources. Specificity of agricultural production is a significant dependence on weather conditions, natural resources, a long production cycle, etc. [Fig. 1].

In general, all factors of competitiveness can be divided into internal and external. Internal factors of competitiveness are the combination of all possibilities of an enterprise which influence on the costs and quality of its products. External factors of competitiveness do not belong to the sphere of influence of enterprise management and are formed in the market environment.

Figure 1 shows the features of agricultural production.

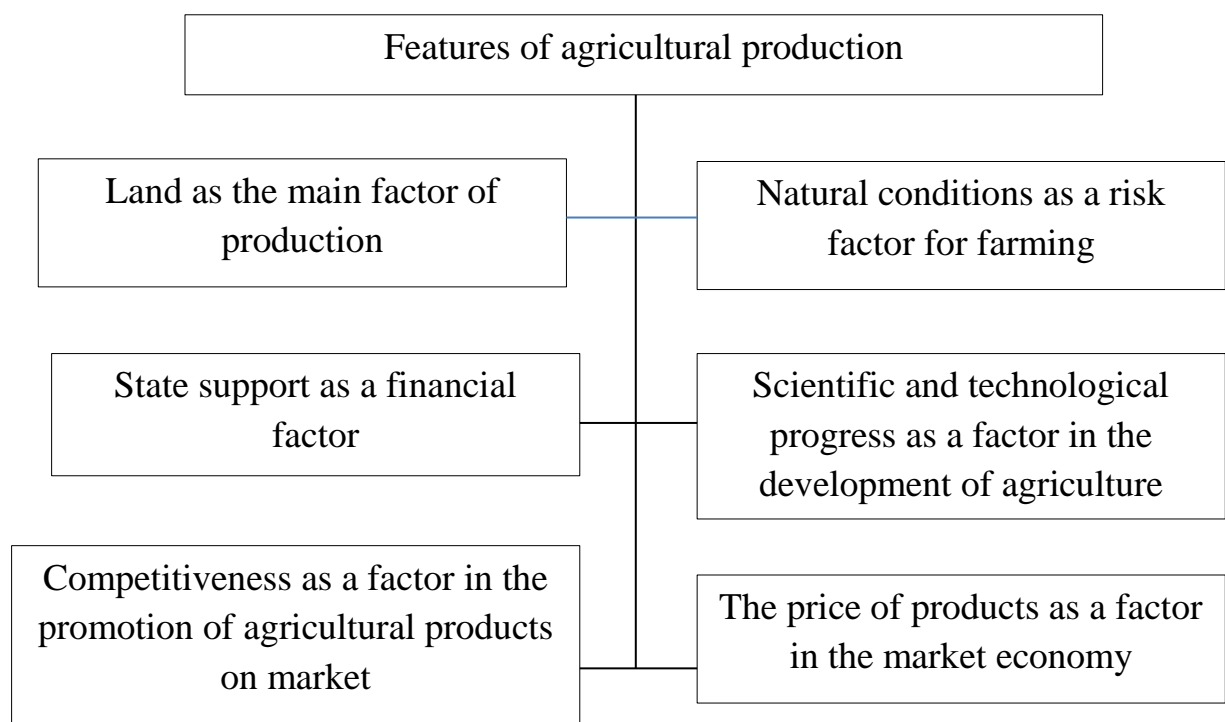


Figure 1. The features of agricultural production

So, the competitiveness of an enterprise depends on the competitiveness of product and of the possibility to ensure this competitiveness in the long term. It is

the internal factors that give an opportunity to keep (conquer) competitive advantages with existing competitors or potential.

The methods of non-price competition acquire priority in agriculture, and price competition operates under conditions of its definite limitation, since price reduction is not always accompanied by an increase in the consumption of products that manufactured in such industry, because it has certain physiological limitations [2].

Based on competitive factors presented by agricultural enterprises and problems of the industry it is necessary to solve the following problems to enhance the competitiveness of Ukrainian products:

- to provide the producers with modern technology;
- to create the newest technologies of cultivation and increase of crop yields;
- to ensure the growth of cattle;
- to finance the agricultural production and increase investment attractiveness of the industry;
- to improve the regulatory framework in this area, review of laws for work related to the assessment and improvement of quality, the creation of a network of national organizations authorized to conduct product certification;
- to expand of the consumer circle on the domestic and international markets;
- to train highly skilled workers.

Agricultural production is radically different from industry, because the output of industry depends on the human factor and the availability of raw materials. The final result of agricultural production depends on many factors, the main one being the natural factor which dictates conditions for the production of agricultural products, and also plays a huge role in agrarian activities.

So, the natural factor plays a very important role in sustainable agricultural production. Let's consider some aspects that affect crop yields:

- according to expert's estimates, the loss of agricultural production from erosion exceeds 9-12 million tons of grain units, as a result the ecological and economic losses of erosion exceed 10 billion dollars annually [4];
- deviation of soil moisture from optimal norms by 10% leads to a decrease in the yield of grain, sugar beet and potatoes to 20-25%;
- yield on secondary saline soils (due to the use of low quality water for irrigation and violations of scientifically grounded irrigation regimes and agrotechnical measures) is significantly reduced, in particular, in cereals - by 1.5-2 times; seduced - 3-4 times; in vegetables - almost 5 times [6].

The degradation of soils that arose through water and wind erosion is better prevented by introducing a number of preventive measures. The main reasons for erosion arising are scientifically groundless and irrational use of land resources.

The self-recovery of agricultural production depends on producers, and they must maintain an unstable balance between the economic consequences of the using the land and the environmental consequences. This responsibility implies that the production of products must meet the needs of the growing population and at the same time keep people with a high quality of life. The social significance of rural residents is to work in harmony with nature to improve the quality of soil, water and air and increase biodiversity.

Currently, there are three main technologies of cultivating soil: traditional (mechanical) processing, minimal (short) processing and technology No-Till.

The oldest types of soil processing are mechanical in nature. Mechanical solutions involve physically changing the property of the soil somehow, in order to affect its gradation, solidity, and other characteristics. The purpose of mechanical processing is to create a homogeneous soil without weeds, through which seed can be easily traced. As a result, the biological balance in the soil is disturbed.

Throughout the world, farmers gradually refuse from plowing and introduce new farming systems, such as mini-till, no-till. Today, advanced countries use No-Till technology. Table 1 shows the countries and the area of the land on which the No-Till farming is used [7].

Table 1

The countries and the area of the land on which the No-Till farming is used

| Country | The total area of cultivated land in thousands of acres | the area of the land on which the No-Till farming is used | % of land where No-Till is used |
|-----------|---|---|---------------------------------|
| USA | 113 700 | 23 700 | 20,8% |
| Brazil | 38 400 | 21 863 | 56,9% |
| Argentina | 29 000 | 16 000 | 55,2% |
| Canada | 23 500 | 13 400 | 57,0% |
| Australia | 72 000 | 9 000 | 12,5% |
| Paraguay | 2 200 | 1 500 | 68,2% |
| Other | 579 000 | 4 630 | 0,8% |

There is no technology as effective as No-Till against soil erosion. According to experts, the influence of No-till seeders of different design on crop yield is more important than its initial cost. Research conducted by the US of agriculture department showed an average wheat yield increase of 13% as a result of the transition to the use of the No-till seedlings, and the yields of soybeans increased on average by 27% for the past eleven years [7].

The ranks of supporters of No-Till technology in Ukraine are growing and shrinking gradually, because there is a positive effect. No doubt that this technology requires investment, but as a result, it reduces costs by cancelling of some technical operations, above all it increases the yield of crops. Therefore, the transition to modern soil cultivation technologies has a huge impact on the competitiveness of the enterprise.

Thus, the implementation of this technology can significantly affect the competitiveness of domestic agrarian enterprises, and can increase the yield of crops and reduce production costs.

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