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PECULIARITIES OF USING IMPORTED AND HOMEMADE MACHINERY IN MODERN UKRAINIAN AGRICULTURE

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The article concerns peculiarities, perspectives, and problems of using agricultural machinery in Ukraine. The facts and figures of operating new and earlier used foreign machines, the lack of new up-to-date machinery of domestic manufacturers are analyzed and described.

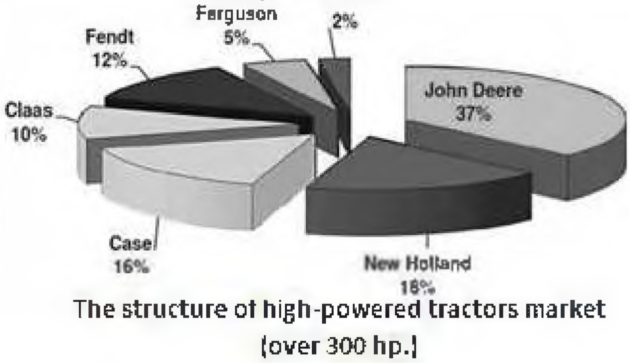
Увагу статті зосереджено на особливих умовах, цифрах та фактах щодо використання імпортної та вітчизняної техніки в агросекторі України.

The potential of using agricultural machinery in Ukraine is large. This is evidenced by the figures of the sown areas of Ukraine: the amount of them ranges the country with France and Germany. But the volume of the machinery market needed for these areas remains very low, five-seven times less than in France or Germany. This sector achieved the greatest success once in 2013 when in terms of technology acquisition our country outperformed even such effective country as Italy. But since 2014 the number of new imported equipment purchasing has been going down and on the contrary, the part of earlier used imported machinery has increased.

According to "Agro Economic Institute", the National research center, Ukrainian farmers are provided with basic types of agricultural machinery for only 50%. A critical situation exists with tractors, which are an integral part of the most industrial processes in a crop production. According to different estimates, about 75% of tractors are outside the depreciation life. The situation is complicated by the fact that the popularity of domestic equipment is gradually descending: in 2004, 80% of agricultural machinery trade was accounted for by plants of Ukraine and the CIS countries, today their part is not higher than 30%. Every year in Ukraine only 2% of a fleet of tractors gets renewed. Experts have estimated that due to the lack of new machinery, our country every year misses more than 6 million of grain.

Though, Ukraine remains a highly attractive country for all the largest world manufacturers because its market has a big growth potential. The potential is not only in the consumption of readily available equipment but also in the demand for spare parts. It needs dealer networks and regional service centers development and an increase of staff.

Nowadays, the leaders of the Ukrainian agricultural machinery market are such international companies as **New Holland** (Great Britain), **Claas** (Germany) and **John Deere** (US), Belarusian factories **Gomselmash** and **MTW Belarus** (Minsk Tractor Works). In total, the production of these manufacturers account for more than 70% of new machines import. And it is obvious today that even the landowners with a land bank of only one-two thousand hectares are interested in the new tractors.

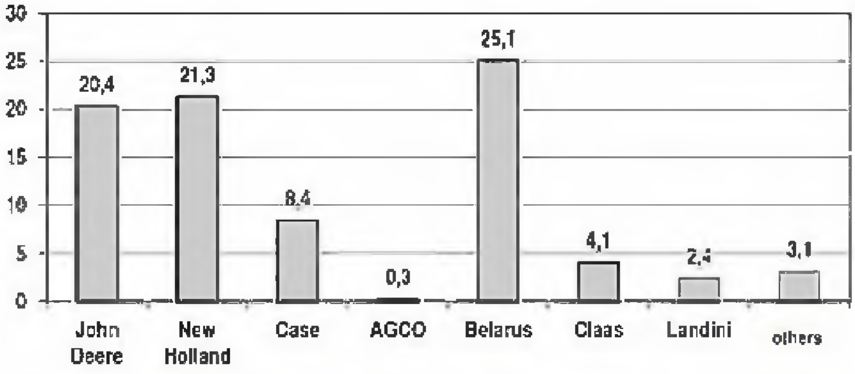


The structure of high-powered tractors market (over 300 hp.)

It should be noted that in the total quantitative composition of 2016-2017 import - 72% of new tractors was supplied by Belarusian works. In terms of cost, the situation looks some different: Belarusian tractors were imported for 110.5 million dollars that is only 29% of total import volume. Equally with Belarusian factories, there was the supply of **CNH** Corporation with its **New Holland** and **Case** brands, the third place belongs to **John Deere** with the market share of 22%.

The segment of high-powered machines is traditionally occupied by tractors with a capacity of more than 300 hp: **John Deere**, **New Holland**, **Case**, **Fendt**, **Challenger**, **Massey Ferguson**. According to the results of the last two years, the first place between the high-power machinery suppliers belongs to **John Deere** Company (37%).

The second position is occupied by the **CNH** Corporation (**New Holland -** 18%, **Case IH** – 16%). The third place is for the **AGCO** corporation. Its **Fendt** and **Massey Ferguson** brands confidently continue to win the favor of Ukrainian farmers (12% and 5%). The **Claas** Company demonstrated a record dynamic of equipment supplying growing in 2016, having increased it almost fourfold against the previous year. The offer of this brand to Ukrainian farmers amounts to 94 units of high-powered tractors.



The market of tractors with a capacity of 100-200 hp. (million dollars)

The premium segment of the Belarusian factory is the market of the rowed tractors with a capacity of 80-100 hp., it is 99% of all imports of this class of machines. During the period of 2016, Ukrainian agricultural enterprises purchased 3,434 tractors of this class. The segment of compact machines with 100-200 hp. capacity became the most dynamic segment of the agricultural machinery market in 2016, which was actively purchased by small farms. Here, the Belarusian models with the market share of 46% feel confident. They amounted to 25.1 million dollars of sales in 2016.

However leading companies have already revised the model range for Ukraine and offer some compact options to farmers and successfully compete with the Belarusians. They are **New Holland T5.110** and **Case Farmall JX 110** models. **John Deere** company is also planning to increase its presence in a segment of tractors with a capacity of 100-120 hp. thanks to the model **John Deere 6B** supplied by the new plant in China. And when the share in such class machinery market was only 11%, the secondary market of John Deere provided the brand with two-thirds of sales.

It's paradoxical, but Ukraine, having such powerful agricultural machinery production as **KTW** (**KTZ**) of Kharkiv Tractor Works, **Chervona Zirka** factory, the **Kobzarenko Factory** and being the largest agrarian country in Europe cannot provide itself with domestic machinery. In the same 2016, the agricultural enterprises of Ukraine purchased only 86 KTW tractors, 4 **UMZ**s (Southern Machine-Building Plant, Dnipropetrovsk), 16 **Kyi** tractors, 55 **KTA**s, and 2 **Koval** tractors. After the last years' forced downtime the Kharkiv Tractor Works resumed its production and 302 tractors were issued from the conveyor track during the first half of 2017.

Today the agrarians are already interested in not the price only, but also in the operational performance of the machinery, the level of its maintenance, the prompt delivery of spare parts, the cost of maintenance, the opportunity to sell it later. And those of market participants win who can provide a developed dealer network, a high level of service and affordable leasing programs.

The increase of popularity of tractors of the 150-200 hp.capacity segment became the main trend of 2017, and now it is increasing in turnover. The most active players in the machinery market are the medium-sized farms with a land bank of almost 5000 hectares. And there exist some examples of tractors in Ukraine which are able to satisfy such a demand. They are the tractors of **KTW-170**, **KTW-160** series (Kharkiv Tractor Works), which have high performances even for international standards. The problem of their technical and technological reliability is not of a conceptual character. If there is an adequate financing of this sector, the issue of confirming the reliability of domestic tractors can be resolved in the shortest possible time. In Ukraine, there is a possibility of a wide production even essentially new Modular Power Machinery based on domestic KTP-170.

Field testing of the MPM has demonstrated a number of advantages. Among them there appeared the universality of the modular principle of use as well as the possibility of use in different traction classes. MPM make the possible to do without tractors of high traction classes, the opportunity to do without imported tractors which are expensive both in the purchasing and in use. But the possibility of domestic agro-engineering developing, its rehabilitation and modernization as well as the technology market development depends on a stable and loyal to the agricultural sector economic system in the state.

Thus, having analyzed the modern market of agricultural machinery in Ukraine, we can conclude that the exploitation of new and used foreign machinery is prevailing in the agricultural sector today. A great number of big and small farms use a worn-out technopark of homemade machines. This factor negatively affects the qualitative development of the country agriculture in general. But Ukraine still has the potential for developing its own sectoral machinery and providing farmers with domestic agricultural machines which are cheaper than imported ones, but highly effective, too.

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