Keywords:*Saharan beet, Other cleaning, transport, rovka, transportnые sredstva, Transshipment, Efficiency*

Annotation.*The technique of a comparative assessment of works of transport facilities on conveyance of a sugar beet from combines is proved.*

Key words: *sugar beets, harvesting, transportation vehicles, overloading, efficiency*

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TO STUDY QUESTIONS feasibility of using small-sized MEW With axle 2K2

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Abstract.*The results of the analysis of the feasibility of using in agricultural production of power means 2K2 wheel formula taking into account the characteristics of households, their material and technical equipment and contribution to the gross output of agriculture.*

Keywords: mobile power unit, compact, axle 2K2, use, usefulness, agricultural production

Formulation of the problem. Food security state is determined by its ability to provide the population with food

food. Getting proper food and raw materials for their production provides the agricultural sector, using the necessary means of production. One of the basic means of production in the crop is machine-tractor unit (AIT), established on the basis of mobile power product (MEW). Given the fact that the agricultural sector unites enterprises of different ownership forms and sizes and individual farms should be noted that the requirements for MEW MTA to create a very rigid and can not be put into any one type of machine. In this case, the relevant question is examining the feasibility of using power means in agriculture for various purposes and sizes, including small wheel formula 2K2 with the relevant provisions of the State Target Program of technical policy in agriculture.

Analysis of recent research. Research and development work with small-sized oil plant, characterized wheel formula 2K2 can be grouped into several distinct groups, namely: 1 - dedicated to improving the design of walking tractors [1-4]; 2 - on the problems of control and

ergonomic aspects of the operation of motor-blocks and aggregates based on them [5-9]; 3 - work dedicated to the sustainability of walking tractors and aggregates based on them [10, 11]; 4 - devoted to the peculiarities of technological exploitation walking tractors and aggregates based on them [12-15]. A study presented in these papers relating issues: reducing soil compaction and increasing traction power means, improving performance in the first transmission of certain groups; reduce the harmful effects of vibration to the operator and effort spent on administration - the second; increasing resistance units based on actual walking tractors and walking tractors at work on slopes - in the third; ensure implementation of separate technological operations - in the fourth group.

However, in Ukraine, this time often among producers and researchers sustained discussions on topics as usefulness in agricultural production of small oil plant with wheel formula 2K2 and conducting scientific research to improve the efficiency of their use, which in certain extent, can determine the pace and effectiveness in problem solving resources for agricultural production.

The purpose of research. Set the appropriateness of the agricultural production of small MEW wheel formula 2K2.

Results. Effectiveness of management of any type and size depends essentially on the correct choice of tractor fleet. Using powerful tractors in areas of small size with a small length of the rut will reduce the value of the coefficient of shift time, and hence to increase the cost of production. [16]

Over 50% of households have an area of land to 0.5 hectares - Table. 1 [17]. In such areas the use of cars and classes 0.6 above are not effective. However, the tractor is used in 77.9% of the economy (Table. 1 Data for 2014), and a horse or ox - in 30.4% of households and despite the fact that manual labor is also used in 93.0% of households. The explanation is contained in [18], which states that the owners do occasional work using mechanized tractors (autumn plowing and spring cultivation) and further cultivation performed manually or with the help of manpower. Under these conditions, a significant reduction of manual labor fate of tractors guestrooms in households at the end of 2014 amounted to 188 thousand. Pcs. (Fig. 1 [17]) at this stage should be expected. The foregoing can be explained by the fact that, for example, from 2005 to 2014 the number of tractors increased from 135 thousand. Pcs. to 188 thousand. pcs., that is 28.2% and the number of households that used manual labor also increased from 89.6 to 93.0%, or 4.3%, which is not natural for a growing number of situations where tractors. So households in recent years, significantly increasing fleet of small tractors and motor blocks (see. Fig. 1 [17]).

1. Brief description of the farms in terms of years.

The indicator for households		*Years*					
		2005	2010	2011	2012	2013	2014
The average size of land area, ha		1.08	1.20	1.21	1.22	1.18	1.23
The structure of land space,%	0.5 ha	50.8	50.9	50.6	50.2	52.6	51.1
	0.5 - 1.0 hectares	30.3	27.3	27.3	27.0	25.9	27.3
	More than 1.0 ha	18.9	21.8	22.1	22.8	21.5	21.6
Presence Technology,%	all households	11.9	13.0	14.6	14.8	15.8	17.4
	with a land area of over 1 ha	27.6	27.7	27.7	28.8	32.2	33.4
For the cultivation of land use	manual labor,%	89.6	93.8	89.3	90.0	93.3	93.0
	horses, oxen	33.6	32.4	31.8	31.4	30.0	30.4
	tractor%	66.9	73.9	72.7	73.8	75.7	77.9
Induce employees,%		18.0	16.4	15.6	15.0	14.0	15.2

The average rate of increase in the number of tractors in farms in 2005 did not exceed 5.3 thousand. Pieces. a year, and small MEW - 11.4 thousand. pieces. That small MEW be purchasing at 2.15 times.

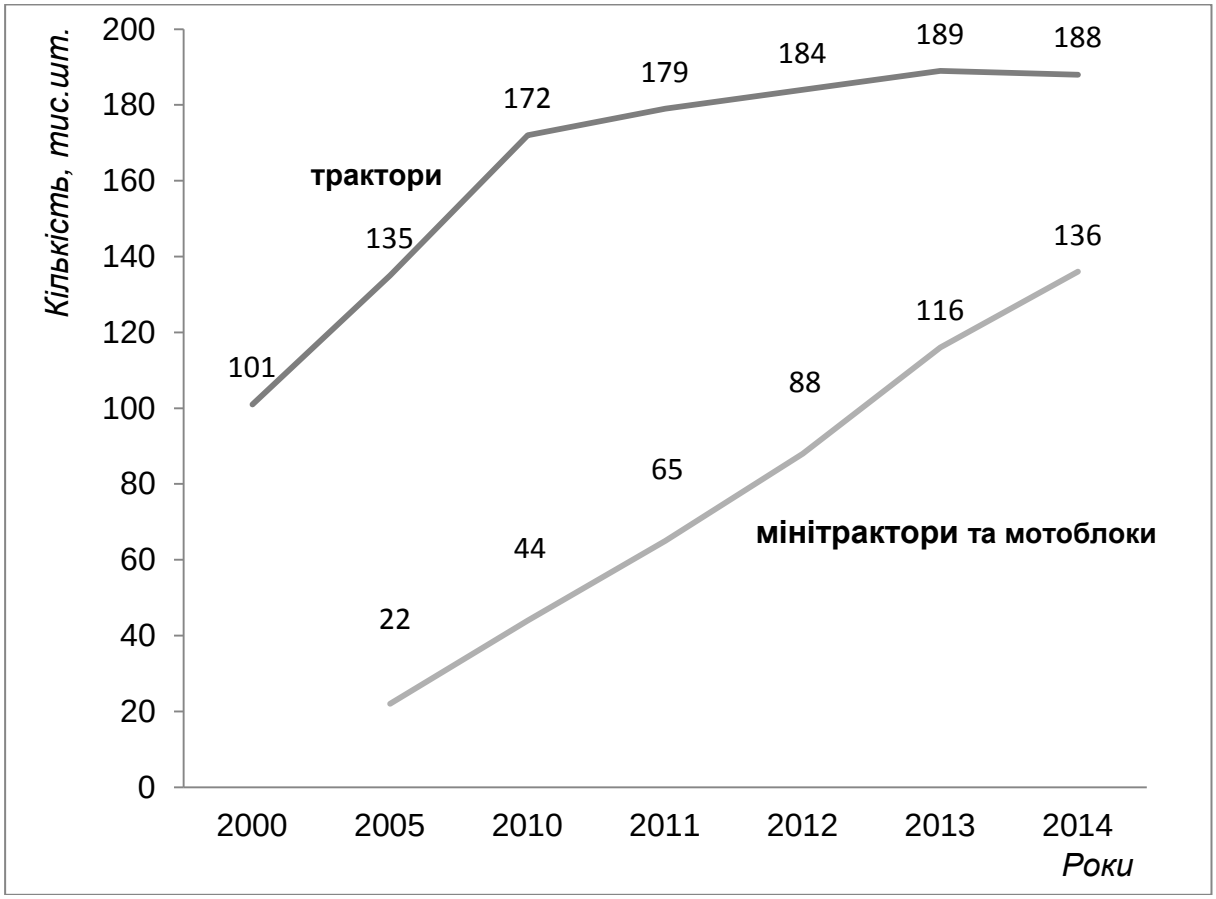

Fig. 1. The presence of tractors, tractors and family households.

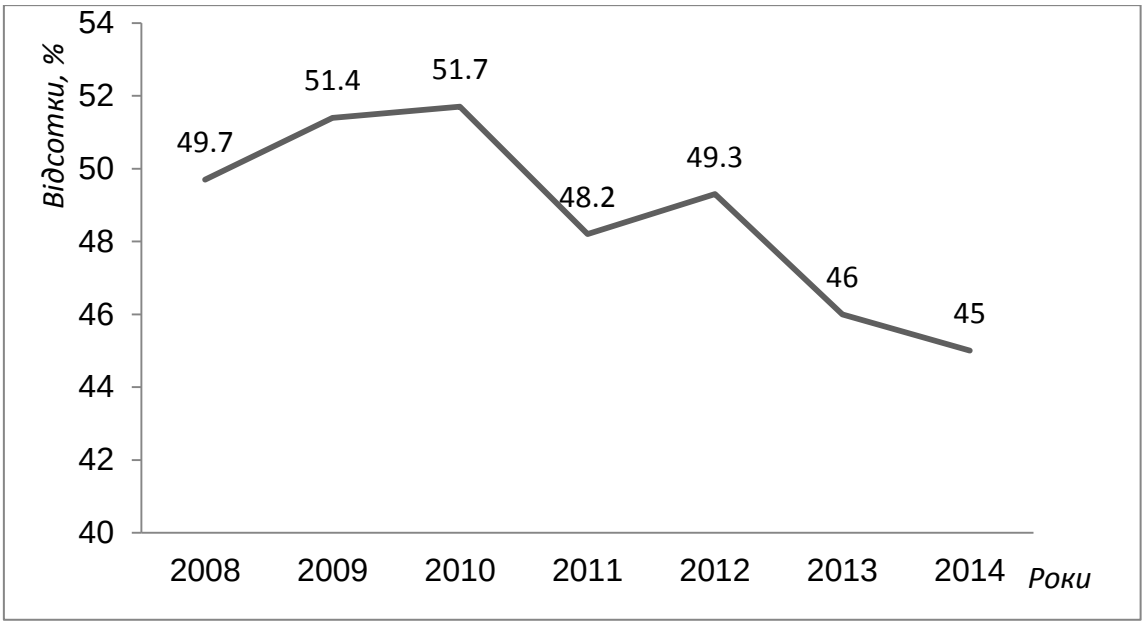

Fig. 2. The share of households in agricultural production.

It is difficult to track the impact of the availability of mobile energy resources in Chaska households in agricultural production, because the dynamics of this index in recent years shows some decrease (Fig. 2 [19]).

Explain the situation can be that the number of households in 2014 decreased by 15.8% compared to 2005 and amounts to 4,136,800. Thus, based only on quantitative composition, level of power means households is only 7.8% [17].

It is known that the small MEW today include two groups of machines, namely, machines which move and control is provided only elements of the chassis, usually three- or chotyrohkolisnoyi or caterpillar; machine movement and control that is provided as elements of the chassis, and the man (her supporting-driving machine).

The first group is represented by compact cars. Their work and block like tractors and usually almost entirely borrowed from the changing characteristics related to size and weight.

The second group of cars - a uniaxial tillers and cultivators of the axle 2K2. Their use is based on the use of human muscle power. This is the reason that some of the energy consumed by any process other than energy consumed to control the actions of the selected person. The size of this share depends essentially on the characteristics of the unit, created on the basis of the oil plant and determines the degree of operator fatigue and lower productivity. And these negative phenomena are directly related to the operation of tillage units - slip of drivers, poor accuracy of movement. The first group of cars better known, understood and predictable in operation, resulting in less stomlyuvannya operator and that this may partially explain the origin of discussions on the feasibility of using second group of machines that the state appeared on

the market quite recently, so less known to consumers and quality guidelines their effective use yet exist. However, the first group of cars much more expensive machines of the second group and do not always provide the customer requirements, which handles the area of complex shape. Experience the same operation small oil plant abroad does not question the feasibility of using power means of wheel formula 2K2 (walking tractors and motokultyvatorov), only emphasizes the need for their presence in parks, farms and efficiency through appropriate research and development work . In addition, oil plant with wheel formula 2K2 (tillers, cultivators) of the above reasons is limited to use land size, power and engine set width milling cultivator - Table. 2 [20]. However, these are the size of plots have the vast majority of households. And even if limited to the area of 1 hectare farm where the use of motor-block are guaranteed to be effective, then this group will get 78.4% of households of the total, which corresponds quantitatively 3243.3 thousand farms.

2. Dependence amount of land, engine power motoblock and cultivator milling width.

The size of area, ha	Engine power, kW	Width cultivator city
0.2	2.6	0.6
0.6	2.9	0.8
1.0	3.7 - 4.4	0.9
1.0 - 4.0	6.6 - 8.8	1.0
Over 4.0	Use motoblock not effective	Use motoblock not effective

Conclusion. As a result of studies found that households provide mobile power means no more than 7.8% of the total, while with MEW wheel formula 2K2 (tillers and cultivators) can be used effectively in at least 3243.3 thousand farms with the possibility of increasing effectiveness of their use through appropriate research and development work, which can make further directions of scientific studies on this direction.

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Abstract.*Analysis results is set out in tselesoobraznosty Using selskohozyaystvennom production эnerhosredstv with the formula kolesnoy 2K2 with uchetom characteristics of farms, s material and equipping of technical and contribution to valovuyu Agricultural production.*

Keywords: mobylnoe эnerhetycheskoe funds, malohabarytnoe, kolesnaya formula 2K2, Using, tselesoobraznost, production of selskohozyaystvennoe

Annotation.*The results of the analysis of the feasibility of using in agricultural production power means with the wheel formula 2W2 into account the characteristics of farms, their material and technical equipment and contribution to the gross output of agriculture.*

Key words: mobile power means, small-sized, wheel formula 2W2, use, expediency, agricultural production

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ANALYSIS OFPREDICTION OF RECOVERY OF MACHINES FOR TECHNICAL WORKS Forestry

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Abstract.*In the article the features of analytical approaches to the systematic recovery machines for Forestry work.*

Keywords: recovery, efficiency, forestry machine

Formulation of the problem. If the branch prediction videnovlennya technical condition of machines Forestry works as a causal model has L levels, the setting (L-1) Th level dynamic factor will matter $D^{L-1} = S^L \cdot D^L$ and similarly $D^{L-2} = S^{L-1}D^{L-1} = S^{L-1}S^L D^L$:

$$D^N = D^L \prod_{L}^{N+1} S^m, \quad (1)$$

where: $m = L, L-1, L-2, ..., N+1.$