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RESULTATY The modern combine harvesters SAMPO-UKRAINE 300

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The article presents the results of research Ukrainian modern combine harvester Sampo-Ukraine 300 that best meets the needs of the market combine Ukraine.

Co.mbayn Sampo-Ukraine 300.

Resolutionska problem. Lowand the technical condition of the national park annually causes combine Ukraine grown harvest losses amounting to about one million dollars. Therefore there is an urgent problem finding opportunities to create a modern combine harvester and adjusting its production.

AnaLiz recent research. Ukraine has taken some steps to create designs combines: Slavutich, Lan, and Skiff adjusting their production in Kherson engineering plant. However, while the quality of performance and process reliability are much foreign equivalents.

Metand research. Restingcamping on the experience gained national combaynobuduvannya and taking into account global trends combine harvester, combine to create a domestic element base using foreign firms.

Rezultaty dossurvey findings. Hand
Sectionidstavi condenoho anaLease
parkcombines in [1, 2, 3] operating in Ukraine, concluded that the criteria: fuel consumption, performance, power consumption, direct operating costs, the cost of one kilogram of horsepower and weight combine safety factor and ergonomics best suited for farms yield of 60 kg / ha Combine firm SAMPO SR-3085 Superior.

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Bulland conducted laboratory bench and field tests. Test conditions are presented in Table. 1.

1. Terms and testing.

Indicator	The value of			
	according to the draft	According to tests		
Yes and Place Culture is a test	-	27.07.2012 P.	31.07.2012 P.	13.09.2012 P.
	-	c. Wheat Kiev region.		UkrNIIPVT
	Crops colosovi, legumes	Winter wheat	Ravine and wheat	Col
Fat st, c/ Ha You hundredth of plants	His less than 40.0	40.25	232	197
cm Polehlist % Cpivvidnoshennya	- Dat 20.0	79 15	74 6	84 0
grain and straw Weediness,	1: (0.8-1.5)	1: 1.0	1: 1.1	1: 1.0
% Masa 1000 grains, g Yousota	Dat 1.0 His less than 40.0	18 36.76	02 284	01 1440
Creeprisoners lower bean, see Dewlapguest, %	-	-	-	148
- Grains	Dat 20	124	121	115
- Straw	Do25	125	123	123



Ric. 1. Combine Harvester Sampo-Ukraine 300 during laboratory and field tests.

Aboutled economic comparative tests in Vinnitsa and Kherson regions showed high technical and economic performance of these harvesters.

At the suggestion of the manufacturer - OOO "HC" Innovative Technology "company Sampo Rosenlew Ltd has agreed to put components combine for their adaptation to harvesting grain in Ukraine, to create a prototype harvester and after state tests begin joint production in Ukraine. Prototypes was awarded brand Sampo-Ukraine 300 and it

buas presented in the state acceptance trials in UkrNDIPVT them. L.Pohoriloho (Fig. 1).

Indicatorquality and process performance based on the results of laboratory and field tests are given in Table. 2, Table. 3.

2. Indicatorquality and process performance in winter wheat harvesting.

Indicator	The value of					
	according to the draft	According to tests				
Culture spiked	Fromernovand	Winter wheat				
	forultury					
Rotary drums, rev / min.	900-1250			800		
The gap in MCC (inlet beater)	14-20			12		
mm gap in MCC (the output of the beater) mm	8-12			8		
Fan speed, rev / min.	700-800			750		
The gaps in the sieve, mm:						
- Top	10-14			14		
- Lower	8-14			12		
Youhundredth of a cut cm	5, 0-20,0	155	16	157	230	
Widthand capture the city	57	55	54	54	53	
Stitchesdkist movement,	His more than	21	46	56	72	
Productivity per hour aboutAIN time t / h.	His less than 14.0	47	102	120	155	
In thespending on grain combine, total,% including:	His more than 2.0	119	115	217	527	
- For the header	His more than 0.50	028	030	033	035	
- For grain threshing	His more than 1.50	091	0.85	184	492	
instrument Chipping%	His more than 2.0	38	39	37	39	
Zasmichenistzernovohovorohu%	Hebilshe3,0	10	10	09	11	

According to test results revealed that the functional capacity of the main systems combine harvesters and threshers, provides technological reliability combine at speeds up to 10 km / h. Performance combine reaches 15-18 tonnes of grain for 1 hour of normal time. Quality work - losses of grain by grain crushing combine and generally meet the requirements

projectin TU. Grain cleaning system ensures good clean grain from nezernovyh impurities resulting infestation of grain bunker - a small (0.9 ... 1.1%) with acceptable 2.0%.

3. Indicator quality and performance of the process in spring wheat harvesting.

Indicator	The value of						
	fromworthy project TU	According to tests					
Culture	Cereal spiked culture	Ravin shenyt I					
You hundredth of a cut	5, 0-20,0	161	168	eAP	s	244	249
Width and capture the	57	54	55	54	55	54	53
Stitches and movement km/ H.	His more than 10.0	41	55	67	82	95	113
Performance on hour of normal time, t / h.	His less than 14.0	51	71	83	106	118	140
In the spending on grain combine, Total, %	His more than 2.0	141	112	097	170	139	230
including:							
- For the header	His more than 0.50	034	034	038	041	049	068
- For threshing	His more than 1.50	1, 07	078	059	129	090	162
Fragmentation grain %	His more than 2.0	40	42	39	45	43	40
Contamination grain heap, %	His more than 3.0	53	53	58	55	59	50

As a result of agrotechnical assessment revealed that combine Sampo-Ukraine 300 on direct harvesting winter wheat satisfactorily perform workflow and provides a regulated productivity and quality of work performance loss and fragmentation debris grain.

Effectsness of working time combine Sampo- Ukraine 300 satisfactory, the utilization of variable time is 0.71, which meets the requirements of the project TU.

During the period of time between tests was to combine 45 hours. normal time. During this time, combine flattened 97 hectares of early cereals and harvested 380 tons of grain. Technical failures during this period observed reliability coefficient is 1.00. It noted the high technical level and the level of element base combine.

TechNIKO technological solutions used in its construction meet current trends combine harvester. Combines Sampo-Ukraine 300 meet all requirements of ergonomics, health and safety.

TechNight examination and test results give reason to believe that under the technological scheme and technical

pYisheng used in design, system parameters threshing and separation of basic grain thresher width, length and shakers shakers Reaper ability to operate in a high operating speeds combine technology can provide reliable and high-performance milling operation with 18 tons of grain for 1 hour of normal time.

Conclusion. In the dAniand Chawith combineand from stillm pivnem productivityness as in Ukraine Sampo-300 is widely used in terms of grain production in Ukraine. Tend to increase their number of stores and so they are welcomed as part of the park combine.

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In Article pryvedeny Results of research Ukrainian sovremennoho zernouborochnoho Harvester Sampo-Ukraine 300 kotoryy nayluchshym image otvechaet Requirements combine market of Ukraine.

Co.mbayn Sampo-Ukraine 300.

There are described in paper the results of experimental researches of Sampo-Ukraina 300 modern Ukrainian grain harvester to meet requirement of Ukrainian grain harvester market.

Combine Sampo Ukraine 300.