

Problems and Prospects for Strengthening Technical and Economic Security of Agricultural Enterprises

Oksana Perkhach

Administrative and Financial Management Department,
Lviv Polytechnic National University, UKRAINE, Lviv,
S. Bandery street 12, E-mail: Oksana.L.Perkhach@lpnu.ua

Abstract – current state of technical and economic security of agricultural enterprises is explored in the article. The main directions for strengthening technical and economic security of agricultural enterprises are suggested.

Key words - technical and economic security, agricultural enterprises, physical capital, efficiency

I. Introduction

Current business development closely linked to the high level of its economic security. Because only in such conditions it is possible to provide effective strategic planning, efficient management and monitoring both internal and external business processes etc. New technologies and high quality physical capital play a crucial role in converting agriculture to an effective and competitive direction of the development ensuring technical and economic security. Technical and economic security means the providing of enterprise for the physical capital, its modernization and reconstruction in the purpose of achieving continuous process of production competitive products and receiving the profit. The sustainable agricultural production can be achieved only if the enterprise would react in time to changing market conditions.

II. The purpose of the article

The purpose of the article is studying the problems of technical and economic security of agricultural enterprises and displaying prospects of its solution.

III. The main material

Agriculture is the most important branch of economy in Ukraine. In 2014 it provided up to 11% of gross value added. The employment in this field of economy is more than 3 million people. There were almost 52.5 thousand of agricultural enterprises and entrepreneurs and they used 36.4 mln hectares of agricultural land [1].

Economic sustainability of agricultural enterprises depends on internal factors such as resource potential and its effective usage, technological equipment of production, economic and technological development of the enterprise ensuring a high level of profitability.

The residual value of physical capital in agriculture trends towards to increasing, because of capital investment increasing up to 62% in 2014 comparing to 2010 (Table I). The biggest share of these investments was made by agro-industrial holding companies [2]. They have access to "cheap" financial resources from International financial corporation and other organizations.

That is why these kind of agricultural enterprises are well-provided for physical capital, than small-scale farms or households. However the rate of capital consumption was high and in 2014 it was about 38%.

TABLE 1

BASIC INDICATORS OF TECHNICAL AND ECONOMIC SECURITY
IN AGRICULTURE OF UKRAINE

Indicators	2010	2013	2014	2014 to 2010, %
Residual value of physical capital, mln. UAH	63444,6	98134,8	103033,7	162, 4
Rate of capital consumption, %	...	35,4	38,4	x
Output per 100 UAH value of physical capital, UAH	307,18	257,66	244,04	79,4
Physical capital per 1 employee, thsd. UAH	98,01	168,56	195,62	199,6
Net profit per 100 UAH value of physical capital, UAH	27,19	15,21	19,67	72,3

Source: [1]

We can notice that physical capital usage was not effective, because in 2014 output per 100 UAH value of physical capital decreased by 21% comparing with 2010. Also net profit per 100 UAH value of physical capital decreased by 27% in the same period. Physical capital per 1 employee increased, because of decreasing of employees in agriculture. Also the main problem of technical and economic security of agricultural enterprises of Ukraine is that these enterprises mainly use the physical capital rented in the owners of property shares. Agreements of rent are conducted for a short-term period. Depreciation of fixed assets is counted by neither renters, nor holders. Thus one of the sources of physical capital renewal – depreciation – is lost. In such circumstances, it is difficult to form not only strategic, but also current development programs aimed at efficient use of assets, getting profit and ensuring the technical and economic security.

There is the tendency of gradual decrease of technique in agricultural enterprises (Table II). From this it follows that the loading per 1 tractor or 1 combine is increasing. In these conditions it is difficult to provide mechanized field work in time. Agrarian producers can not used 25-35% of tractors, combines and other machines due to technical problems and physical capital consumption. This leads to the extension of field work and loss of 20-30% of the harvest.

Also there is a situation, when one enterprise has more than it is necessary some kind of machinery and another enterprise hasn't needed quantities of this machinery. So, in this case it is advisable to organize the association of enterprises in the purpose of optimal machinery usage in such situations. Within the framework of association it would be possible to create and coordinate schedules of using machinery and the rent for them. Also it is advisable for small-scale enterprises to create service cooperatives in the purpose of buying new machinery for common use.

TABLE 2
AGRICULTURAL MACHINERY IN AGRICULTURAL ENTERPRISES,
AT THE END OF YEAR

Indicators	2010	2013	2014	2014 to 2010, %
Tractors, thsd. Pcs	151,3	146	130,8	86,5
per 1000 ha of arable land, pcs	8	8	7	87,5
Grain harvester combines, thsd. Pcs	32,8	30	27,2	82,9
per 1000 ha of grain sown area, pcs	4	4	4	100,0
Potato harvester combines, thsd. Pcs	1,7	1,5	1,3	76,5
per 1000 ha of potatoes sown area, pcs	59	16	43	72,9
Milking equipment thsd. Pcs	10,9	11,2	10,5	96,3

Source: [1]

Nowadays agricultural enterprises write off 2,6-6,5% existing machines annually, and buy only 2,3-4,6%. For normal reproduction of technical machines it is necessary to renew them by 18-20%. For example, now the Ukrainian agricultural producers use 2% of domestic grain harvesters, 20% of foreign grain harvesters and 78% of old constructive combines from Soviet times. The same situation is for other types of technique. Domestic technique and machinery are behind the world analogues in 2-3 generations. It is characterized as high power inputs, low productivity. Domestic technique demands more man-hours work. Low level of mechanization affects on the amount of production costs. For instance, in large-scale enterprises the technologies of crop production consists of 90-95% of mechanized work, and in small farms it consists of 65-75%.

Agricultural producers, particularly large-scale enterprises, start to invest in animal production (Table III). They build new construction for stock-raising farms and store houses using new technologies of agricultural production. We can see that stock-raising farms for cattle increased by almost 4 times in 2014 comparing to 2010. Also producers put money for conservation of vegetables, because they have the problem in this matter too.

TABLE 3
CONSTRUCTIONS FOR AGRICULTURAL PURPOSES
THAT WERE PUT INTO OPERATION

Indicators	2010	2013	2014	2014 to 2010, %
Stock-raising farms, thsd. enclosure				
for cattle	3	8	11	366,7
for pigs	24	1	15	62,5
for poultry	7229	2754	11195	154,9
Poultry farms				
of egg direction, thsd. laying hens	1560	1546	2852	182,8
of meat direction, mln. heads per year	13,2	0,2	7,3	55,3
Store-houses for potatoes, vegetables and fruits, thsd. t of simultaneous storage	25,5	42,4	77,3	303,1

Source: [1]

Nowadays small-scale agricultural enterprises cannot make investments not only because of deficit of financial resources, but also for lack of clear guidelines for expedient trend of investment. So it is important to organize marketing service, which can explore and forecast agrarian market conditions, also circulate this information among producers of agricultural products.

It is complicated or sometimes impossible to use most of physical capital in agricultural enterprises in a different ways. Because of low business activity in rural areas it is difficult to sell some means of production, which are not used now or wouldn't be used in the future. The problem is strengthened by difficult and dynamic situation in the market of agricultural products. Producers of agricultural products are deprived of the information about expected market situation. Enterprises take decisions concerning reasonable ways of physical capital usage according to the information of previous market periods. As a rule, in the following year producers usually raise the output of such products, that were profitable in previous year. The supply of some agricultural products increases by joint action of many producers. Hereupon prices of those products decrease and farms cannot get planned profit. So it leads to ineffective physical capital usage and as a result low level of technical and economic security of agricultural enterprises.

Conclusion

Timely detection and removal of threats of technical and economic security will ensure the stable development of agricultural enterprises. For this purpose it is advisable:

- to create favorable conditions for investment from other sectors of the national economy and foreign direct investment on the formation of production potential of agricultural enterprises;
- to improve directions and methods of government support of physical capital renewal in small-scale agricultural enterprises;
- to provide information support to agricultural enterprises. This will allow them to change production specialization in time and to get the profit;
- to promote the expansion of technical services and common usage of agricultural machinery, including cooperatives, association and rent.

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