

# Aspects of price formation in agricultural marketing

Legeza Dar'ya

Marketing Department, Tavria State Agrotechnology University,  
UKRAINE, Melitopol, B Khmelnytskyi avenue 18,  
E-mail: dlegeza@mail.ru

*Abstract – price of agricultural products on global market are compared. Factors, which influences on global price, are setting. Phases of price trends are identified. It is ground that level of influence production costs on price is 65-75% in crop production and 80% in livestock. Directions on price formation in agriculture are identified.*

Keywords – agricultural marketing, price, costs of production, global market, agricultural market.

## I. Introduction

Farm reformation caused mechanism activation of pricing at agricultural market. The final price of products in the command- administrative system was formed on the basis of costs of production. At that time the market has demanded prices that could determine the balance between the volume of production and the needs of population. Pendency of owner on land has directed further activities of many farms toward inefficient using, such as non-crop rotation and giving preference to more profitable crops.

The aim of the article is to substantiate the principles of price formation for agricultural products. Research of price trends was conducted for basic agricultural products for the period 1998-2012 years. The main results of the impact factors on the price change were made according to farms reports at 2012 year.

## II. Impact of the global agricultural market on prices in Ukraine

There is a gradual but uneven process of price rising of the main agricultural products in Ukraine. Prices of sunflower and beef increased by 6 times, for corn, wheat and barley - 5, milk - 7, pork - by 4.5 times. The maximum price increase occurred in 2007 and 2010 years, when the price of barley in 2007 increased by 7 times. Thereby, price of milk and meat in 2008 increased by 5.5 and 7.5 times compared with 1998 year.

Price formation for domestic products is based on trends in world prices. It influenced by agricultural prices that prevailed in Asia (the main importer), and in Eastern Europe (Poland, Hungary, Slovakia), which are the main competitors in the market.

Market prices of wheat for 1998-2006 years were virtually unchanged. Asian market has the preference, where price is higher on \$ 50 per ton, to compare with the world market. There was the equilibrium price in 2007, which equals \$250 per ton on all regional markets [6].

Market prices for sunflower seeds have recession and growth. The decline took place in the European market in 2000-2001 years, when the market was saturated with supply. On sunflower seed market Asian has the

preference too during 1998-2012 years. Sunflower seed price was over almost \$ 200 per ton, to compare with the world market. The equilibrium price was established on the world market in 2003 and 2004. Financial crisis in 2008 led to the fall of prices of sunflower in all rialtos. Beef market has the trend of phased rise in prices since 2002. In this period, the price of beef was almost the same on European and world markets. In 2009, the prices amounted to \$4000 per ton, or 32 UAN per kg, while in Ukraine the farmer's price on beef was less than 25 UAN per kg.

Price with quality sets dynamics of sales. Type of market influences on the level of competition differently. Most of the agricultural products are sold under imperfect competition, where additional competitive advantages are performed by assortment, quality and seasonal sales. There is traced maintaining existing price level on the market during harvesting and distribution. Inflation doesn't have a major impact on agricultural market. As in the meat branch, the price on corn and sunflower seed are low to compare with the price in the market. In fact, margins between the production cost and farm price, farm price and the price in the market provide competitive potential for farmers. However, this potential is usually used only by holdings and trade company.

Growth of price in agriculture took place in two post-crisis periods - 1999-2001 years and 2008-2010 years. To compare with 1999 the price of maize, wheat and barley has almost doubled in 2000. As a result, price increased for beef and pork by 2.3 times in 2001 year. In the next crisis period of 2008-2009 years, the situation prevailed in the direction of lower prices for crop production, resulting growing problem of competitiveness of farms. Firstly, large harvests in 2008 led to an influx of huge volume of products, which caused lower prices. The first problem led to the second. Expecting to get more revenue by reducing price, farms reduced the gap between farm and market price, and thus they reduced competitiveness of products. Farms, where competitive price potential was limited, were forced to sell by advance receiving damage. Thus, the expected profits for the year were obtained. It was a result of lack of flexibility in pricing.

There is a trend for the change in the price of animal products in the next year after the changes of grain price this year in Ukraine. Shining example is agricultural market of 2003-2005 years, when the price of grain fell compared with 2002 year, while a price for animal products has increased significantly. In 2003, prices for meat and milk increased by 1.5-2.5 times compared with 1998 year, and in 2005 - in 4-5 times. One reason for the low competitiveness appears high prices for raw materials and resources.

## III. Price of agricultural products

The main costs in agriculture are directed to acquisition of material resources. In 2012 year, the share of material costs in crop and livestock equaled to 65.9 and 78.4%. The problem is that the most of the costs related to material, is expended once and simultaneously per year.

Farm has to allocate sufficient circulation of money capital in the one time. Thus, logistic cash flows are not distributed evenly. Moreover, at first there is the output flow (cost of raw materials), and few months later there will be input flow of monetary (after receipt of the proceeds of sales).

Thus, using in the production process inequality recourses or its inequality using would be controlled after a certain period. Heretofore, farmer does not influence and affect the process. This agricultural character doesn't give possibility to manage by the process on the market, regulate prices and change volume of products during seasons.

The price of crop products is influenced by oil prices. Change in fuel prices by 50% in 2007 led to the growth of prices for wheat by 38.5% and sunflower by 82.6%. Crop production is sensitive to change of resource prices. Increases in price of resources by a few percent lead to increase in prices of products in half. Producers need to raise prices for products to prevent losses. Resource costs are more than 50% of total production costs [6].

Profit in livestock is "fully controlled" by costs for feeds. Today prices of feed directly affect the change of total production cost and price of distribution. Therefore, it is very important to reduce this impact by producing feed within farm, consolidating orders, optimization feed ration. In livestock, as in crop branch, producers do not pay enough attention to protect product and expand not more than 0.6% of total costs. This reduces product quality and mismatch government standards by chemical parameters.

Agricultural production can't abandon material resources such as seeds, fertilizers, feed even changing the type of technology process. Quality and consumer characteristics can be controlled; amount of resources can be optimized, but not to be excluded from the process. This type of resource defined as irreplaceable and includes fertilizers, pesticides, feed, and petroleum products.

During past five years, the share of costs on fuel is gradually reduced by increasing expenditures for seeds and fertilizers. The share of fuel in wheat production decreased by 4.4 points, corn - 4.0, barley - 3.6, sunflower - 3.5, rapeseed - by 4.2 points. Maximum share of fuel costs observe at production of sunflower and barley and equal 17.7 and 16.8 % on average for 5 years. Rising of costs for fuel is potential to reduce costs of production, to increase the gap between production and distribution price. However, it doesn't mean declining fuel products; it means optimization of the process and reducing the price of the resource.

Some of the ways to solve the issue is to introduce innovation technologies, consolidate orders by few farmers, storage of fuel within farm, and improve relations between farmers and suppliers. At milk

production the share of costs for feed is 46% cattle - 55 %. The greatest share of cost for feed is 62% at pig breeding. However, price per head grows gradually to be based on decreasing the number of livestock.

During five years, the cost of fodder root crops increased by 140.2%, handling - 125.4, haylage - by 138.3 %.

## Conclusion

Farms concentrate their efforts on growing of profit products in Ukraine. This issue is the reason of mass volume of one agricultural products and deficient proposition of other agricultural products. Farms produce many of product types in condition of imperfect competition. Price formation for export products is based on trends in world prices. It influenced by agricultural prices that prevailed on markets of Europe and Asia. Price formation for domestic supply is based on production costs and changed under changing of price of fuel, fertilizers, feed.

## References

- [1] Agricultural Prices and Marketing, Users Manual, Caracalla, Rome, Italy, 2010. [Online]. Available: [http://mospi.nic.in/mospi\\_new/upload/Manual-on-Agricultural-Prices-and-Marketing.pdf](http://mospi.nic.in/mospi_new/upload/Manual-on-Agricultural-Prices-and-Marketing.pdf);
- [2] "Editorial: Rising Agricultural Prices: Causes, Consequences and Responses", Organization for economic co-operation and development, Trade and Agriculture Department, Paris, France, 8 p., 2010. [Online]. Available: <http://www.oecd.org/tad/41227216.pdf>;
- [3] Handbook for EU Agricultural Price Statistics, Users Manual, Washington, US, 2008. [Online]. Available: [http://tilastokeskus.fi/til/ttohi/ttohi\\_2008-09-12\\_men\\_002.pdf](http://tilastokeskus.fi/til/ttohi/ttohi_2008-09-12_men_002.pdf);
- [4] US. Economic Research Service USDA, Assessing Agricultural Commodity Price Variability. Washington: USDA; 1999. [Online]. Available: <http://www.agrilogicconsulting.com/education/resources/Miscellaneous>;
- [5] V. Caride and M. T. Casparri, "Weather effects on agricultural commodity price determination: the storable and non storable cases" presented at seminar of Economic science faculty, CMA, Buenos Aires, Argentina, June 6, 2008, Report: UBACyT 008 Evaluation of Economic and Financial Risks of Climate Change in Argentina. [Online]. Available: <http://www.econ.uba.ar/www/institutos/cma/Publicaciones>;
- [6] V. Mesel-Veselyak, "Profit and expanded reproduction in agricultural production". Economics of Agrocomplex, Kiev: Institute of Agrarian science, no.5, pp. 12-15, 2008.