

MARKET FOR AGRICULTURAL PRODUCTS IN THE DIGITAL AGE

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Abstract

In the context of globalization, future strategies of the agrarian policy must take into account several aspects that are vital for the sustainable development of products in the agricultural markets. At present, the degree of digitization in Romania is quite low, with the largest acceptance rate in the field being mobile applications. Digital agriculture is practiced in our country on tens thousands of hectares only, but as the services in question will be able to demonstrate the benefits they bring, the percentage of implementation on the ground will certainly increase. Digital agriculture does not want to deliver just products, but integrated solutions looking to the future, towards a vision of the third millennium. In this regard, in order to achieve a functional and sustainable economic system, the market for agricultural products must be oriented towards the online environment. Technical progress, provided benefits for the agricultural market and an advantage in forecasting the development of this field.

Keywords: *Agriculture, Online Environment, Agrarian Policy, Romania, Globalization*

Introduction

Between 2010 and 2016, grain trade in Romania had an accelerated dynamic in terms of exports and a weighted rate of imports. Romania is one net exporter of cereals, of which the most sold products on the foreign market are wheat, corn and barley, and the main traditional destinations are Egypt, Spain, Italy, Turkey and Turkey Saudi Arabia (International Trade Center [ITC], 2016). In 2016, Romania was the 12th largest exporter of cereals worldwide ranked third in the list of European Union grain-exporting countries (EU28), with a volume of 10.5 million tons, worth 2 billion euros, this value level of exports reflecting the high production achieved by our country in 2014-2015. The main destinations of Romanian grain exports were in 2015: Egypt (EUR 282 million), Spain (EUR 201 million), Jordan (EUR 131 million), Turkey (120 EUR million), the Netherlands (EUR 108.5 million), Saudi Arabia (EUR 108 million), and Italy (€ 102 million).

In the case of Romania, exports of the main cereal products, wheat and maize had a trend upward in recent years, due to the achievement of high internal outputs (both in physical volume and in volume) quality plan) as well as against the background of increasing competitiveness on the external market, especially in the region Black Sea. Analysis of trends in international wheat and corn prices as well as dynamics Romanian exports of wheat and maize were made on the basis of the processing and interpretation of the most recent data and information published by specialized institutions in Romania and abroad. A primary target could be the market for agri-food products in general, how we present our products both on the domestic and external markets, because in most cases their price level is not in

line with quality; for example, the export value of wheat in the last 3 years does not express either the quality of the Romanian product or its importance in ensuring food security or fails to meet the expectations of the producers regarding the sales price nor is it likely to allow investments, and so on

Globalization is the process that has allowed unprecedented developments and dissemination of technical progress, so that mankind is now at a new stage, that of the digital revolution. Against this background, future policy priorities for agrarian and rural development require reorientation, resizing.

1. Literature Review

Sariannidis, N. thinks that the impact on the wheat market comes from the equity index via market integration and confidence effects and from energy prices as they are important inputs and as the impact of encouraging bio-fuels usage, while Bryant, H.L., D.A. Bessler says that the hypothesis that hedgers pay a premium to speculators is strongly rejected. Hypotheses that trader types are important in determining price volatility are also rejected. Common information may be behind market reactions.

They suggest that there is no limit to the number of futures as long as there is no delivery (contract are being offset). This means there should not be a scarcity of futures and the price of futures could not be pushed up. Pirrong (2010b) explains it as follows: 'Most speculators using futures offset their positions prior to maturity, and hence never make or take delivery of the actual commodity.'

2. Research Methods

This paper is based on two qualitative research. Firstly, the analysis of the statistical data is used for correct and efficient evaluation of the present situation in Romania regarding the cereals market, highlighting the necessity of using an e-commerce platform that will have positive effects on the increase of the share of agriculture in GDP. The SWOT analysis highlights the strengths of the Romanian agricultural sector, highlights the lack of sufficient involvement in this field by analyzing weaknesses, and through opportunities and threats leads to near-medium and long-term forecasts.

The main economic indicators on the cereal market in Romania

Table 5. Wheat area harvested and production in Romania

Element	Item	Year	Unit	Value
Area harvested	Wheat	2015	ha	2102444
Area harvested	Wheat	2016	ha	2135304
Area harvested	Wheat	2017	ha	2052920
Production	Wheat	2015	tonnes	7962421
Production	Wheat	2016	tonnes	8431131
Production	Wheat	2017	tonnes	10034960

Source: <http://www.fao.org/statistics/databases/en/>

Table 6. Wheat Export

Item	Year	Unit	Value
Wheat and products	2011	1000 tonnes	852
Wheat and products	2012	1000 tonnes	804
Wheat and products	2013	1000 tonnes	988
Wheat and products	2011	1000 tonnes	1621
Wheat and products	2012	1000 tonnes	2380
Wheat and products	2013	1000 tonnes	4866

Source: <http://www.fao.org/statistics/databases/en/>

Another possible target is the lack of tools needed for a modern trade, capable of constantly supplying consumers with agri-food products. There is a lack of direct links between agricultural production structures and collection, storage, conditioning / storage structures at local / regional level. These facts limit the access of the producers and implicitly exclude them from the trading operations or emphasize the seasonal character of the valorisation of the results of their work, which is ultimately reflected in the level of the prices of the agri-food products, and thus in the ability to ensure the continuity of the future their productive activities.

Table 7. Wheat prices

Item	Year Code	Unit	Value
Wheat	2015	USD	184.7
Wheat	2016	USD	154.5
Wheat	2017	USD	160.4

Source: <http://www.fao.org/statistics/databases/en/>

The global wheat market is characterized by a highly dynamic market, with chain increases triggered by an essential factor - a drop in production due to dry and warm weather in most European regions. A big influence also had some rumors about the Ukrainian government that would like to consider introducing export quotas for wheat. As a result of this information, on the Chicago Stock Exchange in a matter of minutes the wheat price increased by 5%, while at the Paris Stock Exchange it reached 219.5 euro / ton.

Against the backdrop of a surge, some of the Romanian wheat is on export. Egypt, the world's largest wheat importer, bought on Thursday 240,000 tons of wheat from Russia and Romania at an auction organized by the General Supply Charge (GASC) of Egypt, the entity responsible for strategic wheat purchases on behalf of the Egyptian state, Reuters reports.

The average price paid by the GASC is \$ 253 per tone FOB (Free on Board), which includes the value of the merchandise, all shipping costs to the embarkation point, and all taxes for the cargo to be loaded at board - No), rising from the average price of \$ 217 per tone paid on the previous auction for 60,000 tons of wheat in Russia.

Wheat harvest in 2018, lower than last year.

According to Grains Strategy, this year's wheat harvest in the European Union, taken together as the world's largest producer, will be less than 139 million tones, the lowest in the last six years, and the estimates could still be reviewed downwards.

The malfunctioning of organizing and carrying out commercial activities with agricultural products at national level generates: tax evasion in this field; speculative pressures on product prices to the final consumer; unfair competition between individual market players and traders; competitiveness deficit of indigenous products to products from third countries; and so on. It should also be noted that the degradation of the state of agricultural research shows that the scientific basis for the support of the various strategic programs elaborated has to be implemented. We note that we are currently not only importing biological material, but we are also a net importer of agro-food products, as many agricultural producers do not have the capacity to capitalize on their work. I appreciate that a real development will come if we buy biological material and agri-food products at our own agronomic research institutes as well as from our own agricultural producers, because that is the only way we can retain more value in the country.

In recent years, various e-commerce platforms have been developed that encourage online trade in traditional, agri-food products, authentic directly from authorized producers without other intermediaries, while providing technical and agricultural advice to economic agents involved in the agri-food chain. The success of the extension of this type of approach, ie platforms that promote agricultural trade in the online environment, requires the creation and legalization of a specific infrastructure within which social networks aiming at creating an on-line environment for farmers, promoting individually or in groups their products and their products. These networks have the role of helping farmers to communicate with each other, to exchange ideas and, where appropriate, to encourage new partnerships. Knowledge of the peculiarities of the main agricultural products market - cereals, vegetables, fruits, etc. - it has the role of directing the producers, but also the other branch companies, in the realization of efficient valorisation activities, with added value added and with a high degree of predictability. The adaptation and integration of the agricultural product market into the on-line environment has a role both economic and, above all, social, contributing to a functional and dynamic system. The experience of developed countries shows that although agriculture as a basic branch is consuming resources and progress, it is precisely the integration of the elements of technological progress into the agri-food market that can ensure its functionality. Consequently, designing complex projects to drive agri-food commodities through e-commerce platforms can help to limit the risks to local producers, to establish realistic prices that can contribute to the development of agriculture and rural areas. Against this background, agriculture will benefit from facilities for technical progress and stimulating the agri-food market in Romania.

3. Swot analysis of cereals field

So far, the grain market has little deregulation capacity under the impact of market mechanisms, mainly due to the crisis and economic instability. Following diagnostic analysis, the following strengths, weaknesses, opportunities and threats were identified.

Strengths

- The agricultural area is relatively large, Romania is in the sixth position in the E.U.;
- The arable surface has a significant share in the agricultural one, and the quality of the wheat, especially in the South and East, is conducive to the cultivation of the vegetal plants, the priority of the cereals;

- Existence of a varied assortment range at the farm level, which reduces the non-marketing of products; Adding value to the vegetal production by means of fodder activities and through processing activities;
- Small farmers are inclined to sell their land plots that they own, thus widening land market activities;
- Structural flexibility at the farm level, the agricultural land being leased to large, efficient economic units.

Weaknesses

- Excessive fragmentation of agricultural land and the predominance of individual subsistence households, which affects their access to the market;
- The almost total dependence of the holding's production on the state of nature (drought, flood, frost, erosion etc); the insurance system is poorly practiced both for lack of money and for lack of confidence in its fairness;
- The cost of inputs for agricultural production is considerably high, which affects the price level of agricultural products, much higher on the U.E. market;
- The insufficiency of own financial resources that causes the holding to practice non-performing technologies and consequently to produce production at high costs;
- Access to financial resources is limited due to high costs, which exceed the economic power of most farmers, especially of households;
- Low yields and the instability of annual cereal production needed for domestic consumption, as a result of used, used and moral agricultural techniques and technology;
- The often-inappropriate quality of grains and products based on Romanian cereals due to production technologies or inadequate storage conditions;
- Low prices received by farmers from traders or processors. These are usually to the detriment of the agricultural sector to the weak negotiating power of small farmers, the lack of adequate storage capacities, the failure to operate the deposit certificates system

Opportunities

- Market digitization
- Association in agriculture
- Increasing the absorption of European funds
- Raising awareness among farmers
- Opening new markets
- Improvement of genetic material within research institutes
- Refurbishment of the agricultural sector

Threats

- Climate change
- Price
- Possibility of capping subsidies
- Imports
- Diseases and pests
- Labor migrations

Conclusions

In general, the prices obtained for the Romanian grain export reflect, first, the major trends in the world cereal market: the evolution of the supply-to-supply ratio (initial stocks, production, domestic import / consumption, export, end stocks), the evolution of quotations on the main agricultural scholarships, various information on major events that influence market. They also reflect the evolution of the Romanian export offer (as physical and qualitative volume) and consistency with import demand on traditional markets. An important aspect is also the time of market exit and the optimal use of export potential over the season.

The main problems existing in the development of e-commerce of agricultural products are: Insufficient understanding the development of agricultural e-commerce; Plays a leading role of government in agricultural information construction is not enough; Agricultural structure system is not sound and information utilization efficiency is low; The lack of perfect credit environment.

The malfunctioning of organizing and carrying out commercial activities with agricultural products at national level generates: Unfair competition between individual market players and traders; Competitiveness deficit of national products to products from third countries; Speculative pressures on product prices to the final consumer; Tax evasion in this field.

The solution for these problems and their effects are: understanding the development of agricultural e-commerce through extending the internet access and computer knowledge improvement.

The factors that need to be considered are in essence divided into factors foreseeable and unanticipated factors, external market factors and factors of the internal market. Of those unpredictable, meteorological conditions can be reported. Scholarships international generally react immediately when weather conditions unfavorable may affect grain harvests in the main producing countries. Because of it the variability of meteorological phenomena, the impact they have on one a certain region cannot be predicted, so weather conditions are considered to be one

An important disruptive factor for the future evolution of the international grain market. Of the general trend of prices for crude oil, gold or other basic raw materials, from a certain period of time, can also influence the cereals market. On the other hand, the circumstantial elements of the world grain market such as trade policies of a state, tense economic relations between important regions of the world, helps statisticians in calculating forecasts of fundamental market factors.

Romanian agriculture has a high degree of dependence on weather conditions, and the lack of an irrigation infrastructure at national level, as well as insufficient capacities storage also affects the potential for good harvests but also for efficiency regional and world trade.

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