

TRAINING AND USE OF AGRI-FOOD PRODUCT RESOURCES, CASE STUDY- CEREALS MARKET

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Abstract: The European model of agriculture is based on a competitive market-oriented sector, while fulfilling other (public) functions such as protecting the environment, creating a convenient area for the population in this area, integrating agriculture and forestry with the environment ensuring a proper quantitative and qualitative consumption for the population, etc. The paper presents the link between agricultural production (with a study on cereals market) and its purpose - human consumption - expressed by specific indicators, for the years 2014-2016.

Keywords: cereals, consumption, indicators, resources, uses

INTRODUCTION

The agricultural market can be characterized both structurally and functionally by a series of defining features of which national character is detached, regardless of the degree of participation in world trade. Depending on the degree of economic and social development of the country and the phenomenon of globalization, the national specific may lose its significance, but it remains characteristic of a certain type of economic profile [4]. The agricultural market is the market where state intervention is quite pronounced, each state attempting to protect its national economic system[2]. On a national level, agriculture is one of the important branches of the Romanian economy. The contribution of agriculture, forestry and fish farming to GDP is around 6% of GDP, and in the EU Member States it is around 1.7%.

MATERIAL AND METHOD

The agri – food sector of a country is forming in the process organization of product chains, closely related to change which take place in consumer demands and market developments [7].

The paper contains an analysis of the demand (consumption) relationship - the cereal market offer. The paper analyzes the offer on the cereals market in Romania and the food balances for the main cereals during the years 2014-2016. Through the food balances, statistical indicators are calculated on the population's consumption availability over a certain period of time (usually one year).

For the calculation of these indicators the data are aggregated in a table of inputs (resources) and outputs (uses). The "Resources" part groups the total quantities of a particular agri-food product available to the national economy in the year for which the balance sheet is compiled. They consist of usable production (Pu) and imports of agrifood products (I): Resources = Pu + I The "Uses" part (U) comprises the export of agrifood products (E) intermediate consumption (Ci), losses (P), stock change (Vs) and available for human consumption (Dcu).

On the basis of food balances, consumption-specific indicators are calculated (annual average per capita food consumption, daily average per capita food consumption, expressed in calories, average daily consumption per capita, expressed in protein etc., indicators reflecting consumer habits and the level of living of the population.

RESEARCH RESULTS

The grain orientation of Romanian agriculture is determined not only by the conditions of relief (climate, good soils for the growth and development of these plants) but also by the need for self-supply of the population and lower expenses for the establishment and maintenance of these crops. The cereal market in Romania can be appreciated from the following considerations:

- Existence of a large number of producers (mostly with low economic power).
- Poor transparency, lacking adequate information on the real level of supply and global demand. As a result, a significant part of the production remains at the producer and is not valued on the market.
- The homogeneity is restricted because of the qualitative diversification of cultivated varieties.
- Market access is limited, especially for small and medium-sized producers, with storage and processing monopoly practices.
- The yield per unit area (ha) is much lower than that obtained in developed countries, hence higher costs and less competitive capacity.

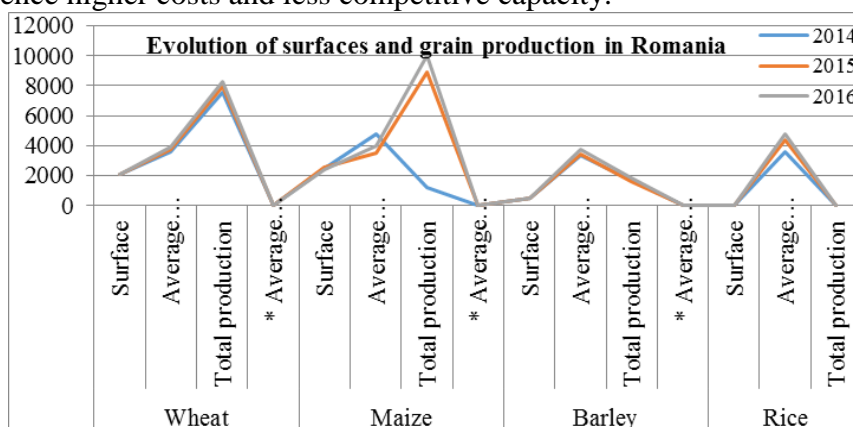


Chart no.1 Evolution of areas and cereals production in Romania

Source: MADR – Producția vegetală la principalele culturi 2007 - 2016

Romania's imports and exports to the main cereals are the following:

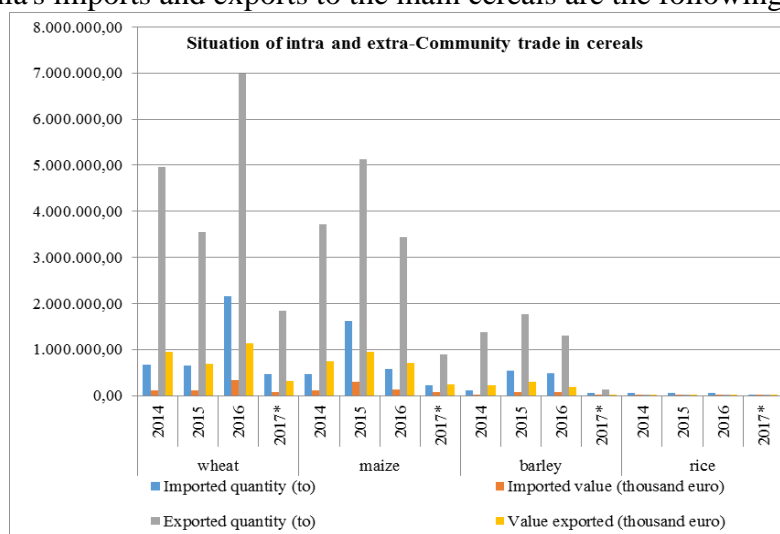


Chart no.2 Situation of intra and extra-community cereals trade

Source : date operative MADR, *perioada Ianuarie – Aprilie ;*** Studiu sectorial-Proiectului "Facilitarea comerțului cu produse agro-alimentare în bazinul Mării Negre, FAOSTAT

In 2015 as compared to 2014:

-the total cereal and grain products (in cereal grain equivalent) were lower by 1468 thousand tons and the cereal production level decreased by 2750 thousand tons and contributed to the formation of the total resources, in a smaller proportion with 5.1%.

-imports of cereals and cereal products (in cereal grain equivalent) provided 8.9% of total resources.

- the initial stock of cereals and grain products (in grain equivalent) contributed more to the formation of total resources (+0.7 percentage points). The share of corn production (47.4%) was the biggest share in total cereal production, down by 7.8% compared to the previous year. The share of wheat and rye production in total cereal production, increased by 7.1 percentage points compared to the previous year (42.1% in 2015 versus 35.0% in 2014).

- imports of cereals and cereal products (in cereal grain equivalent) recorded an increase of 90.2%. Imports of corn (in cereal grain equivalents) as well as imports of other cereals (in cereal grain equivalent) increased by 3.2 times, respectively, by 2.8 times compared to 2014.

- exports of cereals and cereal products (in cereal grain equivalent) decreased by 542 thousand tons compared to 2014 and accounted for 43.1% of the uses. Exports of maize accounted for 46.2% of total exports of cereals and cereal products, while exports of wheat and rye accounted for 37.8%.

- the cereal and cereal products (in cereal grain equivalent) destined for domestic consumption were lower by 825 thousand tons in 2015 compared to 2014. The largest share (55.2%) in domestic cereal consumption, were the quantities of cereals for animal feed, decreasing compared to the previous year by 807 thousand tons

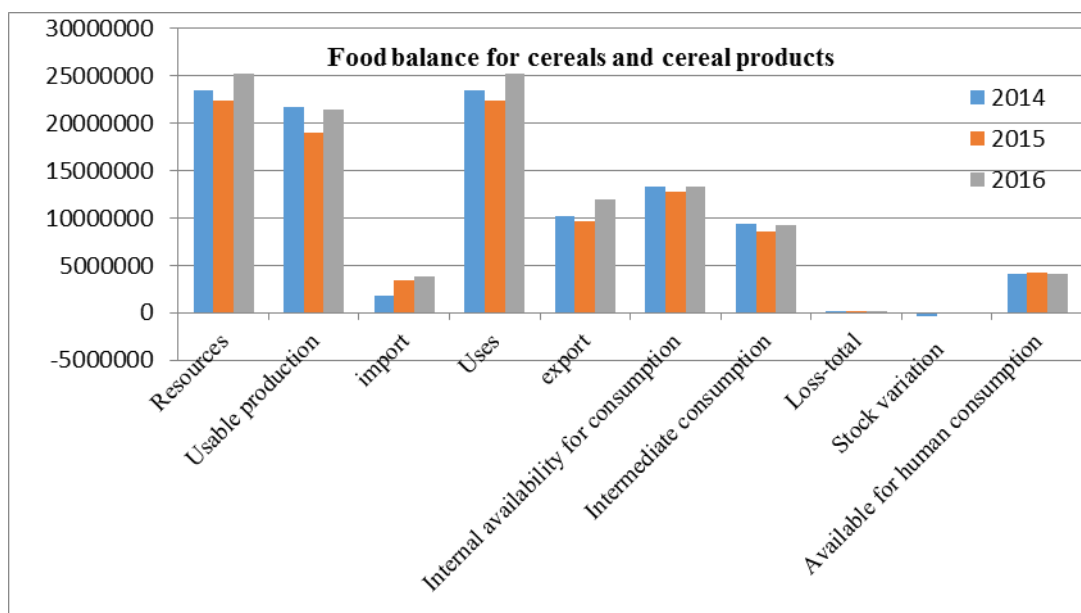


Chart no. 3 Food balance for cereals and cereal products

* In equivalent cereals beans

Source : MADR- Buletine informative MADR

- available for human consumption registered an increase of 63 thousand tons compared to the previous year.

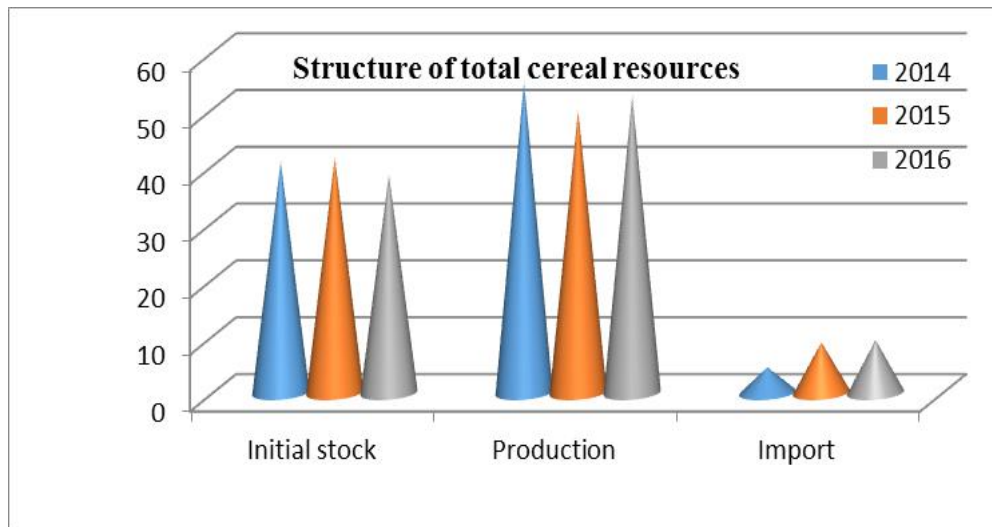


Chart no.4 Structure of total cereal resources

Source: date operative MADR

If we compare 2016 to 2015, we have the following situations:

- the total cereal and grain products (in grain equivalent) were higher by 2780 thousand tonnes in 2016 compared to the level of 2015

- the cereal production level increased by 2460 thousand tons and contributed to the formation of the total resources in a proportion higher by 2.6 percentage points. Imports of cereals and grain products (equivalent to cereal grains) provided 9.3% of total resources.

- the initial stock of cereals and grain products (in cereal grain equivalent) contributed less (-3.0 percentage points) to the formation of total resources. [15]

- the largest share in total cereal production was the production of maize (50.2%), increasing, fading the previous year, by 2.8 percentage points. The share of wheat and rye production in total cereal production declined 2.6 percentage points from the level of the previous year (39.5% in 2016 compared to 42.1% in 2015).

- grain imports and cereal products (in cereal grain equivalent) recorded an increase of 12.4% in the previous year. Imports of wheat and rye (in cereal grain equivalents) and imports of rice (in grain cereal equivalent) increased by 2.5 times, respectively by 16.8% in 2015 respectively.

- Exports of cereals and cereal products (in cereal grain equivalent) recorded an increase of 2302 thousand tons in 2016 compared to 2015 and accounted for 47.3% of the uses. Exports of wheat and rye accounted for 59.7% of total exports of cereals and cereal products, and exports of maize accounted for 29.0%.

- cereal grains and cereal products (in cereal grain equivalent) destined for domestic consumption were 534 thousand tonnes higher in 2016 compared to 2015. The largest share (57.2%) in domestic cereal consumption, had cereal quantities for animal feed, up from 2015 by 552 thousand tons.

- available for human consumption registered a decrease of 79 thousand from the previous year

On the basis of the food balance, the following indicators are calculated: annual average food consumption per capita, annual average net food consumption per inhabitant, daily average net food consumption per capita, average daily food per capita, expressed in calories, daily average daily intake per capita expressed in protein, the average daily

dietary intake per inhabitant expressed in carbohydrates, the daily average daily intake per inhabitant, expressed in fat.

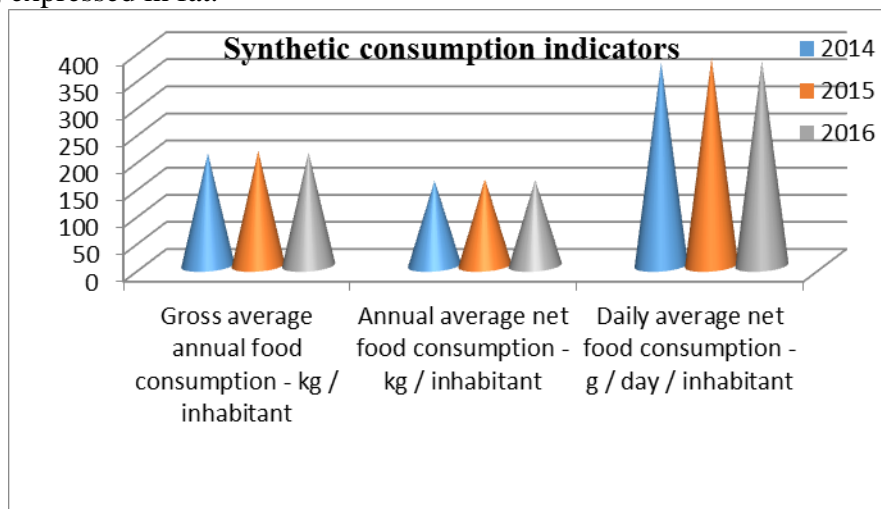


Chart no. 5 Syntetic consumption indicators

Source : MADR- Buletine informative MADR, 13, INS – Buletinul statistic de comerț internațional – BSCI, 2017.

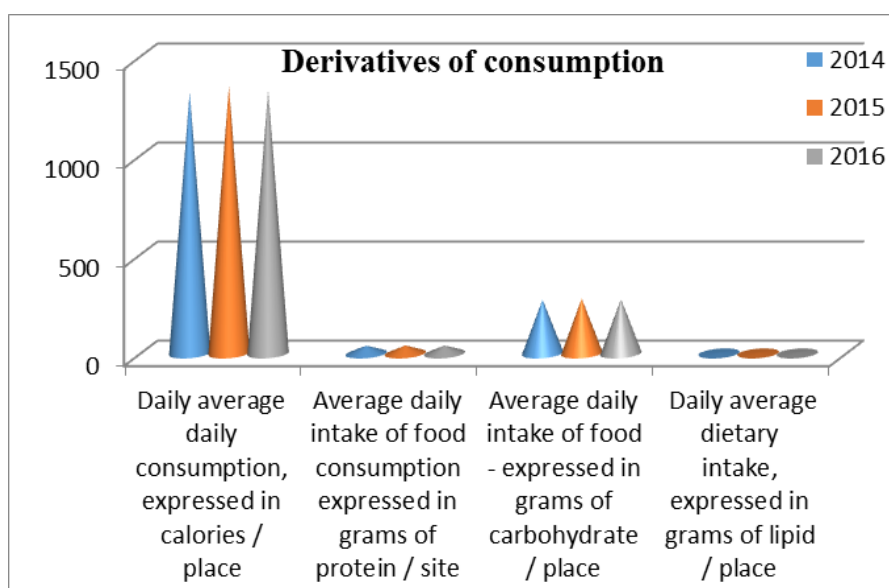


Chart no.6 Derivatives of consumption

Source : MADR- Buletine informative MADR, Institutul Național de Statistică – Anuarul Statistic al României 2015

The agri-food sector has long needed a medium and long-term vision. So much both before and after EU accession, the sector benefited from numerous reform initiatives. Some of these have turned in divergent directions. [1]

CONCLUSIONS

Traditionally, Romania is an important producer of cereals, these crops occupying the largest areas every year. [13]

The sale of cereals by agricultural producers on the domestic or export markets will be based on sales contracts set out in a unitary manner in terms of terms and conditions for all agricultural producers. [9]

The annual agricultural production is still (at a too high level) dependent on the annual weather conditions (weather dependence of agricultural production), because irrigation systems are mostly degraded and nonfunctional, farms have poor equipment with irrigation facilities, water for irrigation has a high cost using low-consumption agricultural technologies from inputs that support performance (quality seed, fertilizers, crop protection substances).

Romania's performance in this sector may increase as a result of the refurbishment of a sector of irrigation. The drought, with increasing frequency, affects agricultural production, especially in the Romanian Plain, Dobrogea and Moldova [6]

Although wheat production has a sale-purchase advantage far beyond that of maize production (and because of the use of corn as feed), however, the wheat market is far below the level recorded in other European countries. In Romania, in 2014, 69.4% of usable production was marketed. In Spain, the percentage was 93.7%, and in Italy about 90%.

The National Institute of Statistics (and, implicitly, Eurostat) publishes food balance sheets. It offers the possibility to evaluate the structure of resources (production and import) and their destination in a self-consumption or sale-purchase system.

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