RICE BALANCE SHEET IN ROMANIA

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Abstract

Rice is one of the cereals grown in Romania, along with corn, wheat, barley, rye. Rice is grown in a small area (701.5 thousand ha - average for the period 2009-2011), is characterized by a total production of 66422,33 tones and an average production of 5181 kg / ha. Presentation of food balance we consider interesting in terms of supply and demand components: production, imports, stocks, exports, seed material, food, industrial raw materials, other uses, losses. Based on the volume of total supply and demand, it could determine the balance of that product at national level.

Key words: *consumption, demand, export, import, losses, rice, stock, tender*

INTRODUCTION

Romania is at the Northern limit of the rice crop in Europe [5].
Rice production is important for food, agricultural technology industry and technology [1].
Rice is one of the oldest and most important agricultural plants, constituting the main food for about 3.2 billion people in China, Japan, Philippines, India, Vietnam, Indonesia, Thailand and Cambodia, where the annual per capita consumption ranges from 120 - 150 kg.
In our country, the first paddy was founded in 1786 Banloc (Jud. Timis), but the most important area was cultivated after 1938 [9].
In terms of soil rice is cultivated on alluvial floodplain soils, normal and salty (saline - alkaline) ameliorating and ameliorated. [7]
The purpose of profitable culture in rice farms in Romania, the following factors must be considered - the average yield, production and marketing costs [4].
Rice harvest is a separate branch of conditioning, processing and marketing [6].
The offer for one product "X" is represented by amounts that producers are willing to produce at a cost "K", taking into account the profit you will get. It becomes important to anticipate rationality that the manufacturer are choosing producing goods and that combination (X1, X2, ... Xn) which provides maximum return on the resources available. In this case we must consider the benefits and costs that firms will record producing different quantities of goods or using various production methods [8].
Food demand can be expressed in many forms [3]: the total value of food principles necessary for meeting the food of the studied population (based on physical units and / or energy); quantifying components assortment of food demand by indicating the needs of each group assortment periods; Equivalence by converting suitable indicators, the necessary food production and distribution potentials (taking into account the production capacity and consumption, seasonal factors influencing consumer incomes, the possibilities for correlation through storage links etc.).
Valid for Agro-marketing the relationship between the supply and demand is considered a fundamental aspect of the functionality of markets in agricultural products [2].

MATERIALS AND METHODS

Carrying out the work involved documenting, through the use of statistical reporting data [10]. For the preparation of the study was used a system of specific indicators, and recommended system used by the United Nations Food and Agriculture Organization -

FAO.

When setting up the total demand are used: food consumption, seed, food consumption, raw material uses other losses (expressed in thousands t). FAO methodology on setting the overall level of demand is made by adding any of the foregoing.

Determining the balance is made on the difference between total supply and total demand. Based on the values of total demand and total supply balance may be legally surplus, deficit, or may encounter a situation of equilibrium.

Is established in the paper, both total supply and total demand for one percentage structure. It then goes to the processing of data by using time comparison method. The data collected and analyzed, covers the period 2009-2011, operating with the average period.

We used two types of indices, fixed base and mobile base.

RESULTS AND DISCUSSIONS

Table 1 shows the components of the national balance sheet of rice.

From the beginning must be stressed that that if the total supply consists of specific elements mentioned at world and European level, in terms of supply components it notes that they are reduced in number - compared to

the state of world and European - talking only food consumption other uses, losses and seeds.

For 2009 it can be seen that the balance was positive, the supply exceeded demand by 1 t. This was a total supply of 80,709 t rice tender is based on: 48,303 t production (59.85%), 43,442 t imported (53.83 %) -98 t stocks (-0.12%), t 10,938 exports (-13.56%). When setting up the total demand have contributed 80,708 t: losses - 2003 t (2.48%), seed – 2,671 t (3.31%), other uses – 4,293 t (5.32%) and food consumption – 71,741 t (88.89%),.

In 2010 the total supply was 50,578 t at which constituent elements had the following percentage rates of participation: 81.23% production (41,079 t), 92.33% imports (46,702 t), 0.19% stocks (98 t), - 73.75% exports (37,302 t). Total demand was 50,579 t, this showing as components the following items: 2.92% losses (1,476 t), 4.91% seeds (2,483 t), 10.48% other uses (5,299 t) and 81.69% food consumption (41,321 t). A result of this situations the balance is deficient -1 t.

For 2011, there is a balance between total supply and total demand, each indicator reaching 93,637 t. In order to establish total supply have acted: production – 43,529 t (46.49%), import – 96,068 t (102.59%) and exports – 45,960 t (-49.08%).

Table 1. Rice: national balance sheet structure - tons (2009-2011)[*]

No	Specification	YEAR						Average 2009-2011	
		2009		2010		2009			
		Effective[*]	%[**]	Effective[*]	%[**]	Effective[*]	%[**]	Effective[**]	%[**]
1	Production	48,303	59.85	41,079	81.23	43,529	46.49	44,303.67	59.09
2	Import	43,442	53.83	46,702	92.33	96,068	102.59	62,070.67	82.79
3	Stock	-98	-0.12	98	0.19	0	0	0	0
4	Export	10,938	-13.56	37,302	-73.75	45,960	-49.08	31,400	-41.88
5	Offer total	80,709	100	50,578	100	93,637	100	74,974.66	100
6	Seeds	2,671	3.31	2,483	4.91	2,536	2.71	2,563.33	3.42
7	Food	71,741	88.89	41,321	81.69	85,167	90.95	66,076.33	88.13
8	Other uses	4,293	5.32	5,299	10.48	3,237	3.46	4,276.33	5.70
9	Loss	2,003	2.48	1,476	2.92	2,697	2.88	2,058.67	2.75
10	Total demand	80,708	100	50,579	100	93,637	100	74,974.66	100
11	Balance sheet	+1	-	-1	-	0	-	0	-

[*]http://faostat3.fao.org/faostat-gateway/go/to/download/FB/BC/F
[**]own calculation

Formation of the total demand for rice is based on varying amounts of rice used in a

number of ways such as: 85,167 t food consumption - 90.95% 3,237 t other purposes

- 3.46%, 2,697 t loss - 2.88%, 2,536 t seeds - 2.71%.

Determining average of period analyzed, there is unity of rice in stock. This offer starts from a total of 74,974.66 t, which had the following structure (Fig. 1): 59.09% Production (44,303.67 t); 82.79% imports (62,070.67 t); - 41.88% Exports (31,400 t).

Total demand reached 74,974.66 t, thus presenting its structure (Fig. 2) 2.75% loss (2,058.67 t); 3.42% seeds (2,563.33 t); 5.70% other uses (4,276.33 t); 88.13% food (66,076.33 t).

Mode of balance development of the component elements of national rice is presented in Table 2.
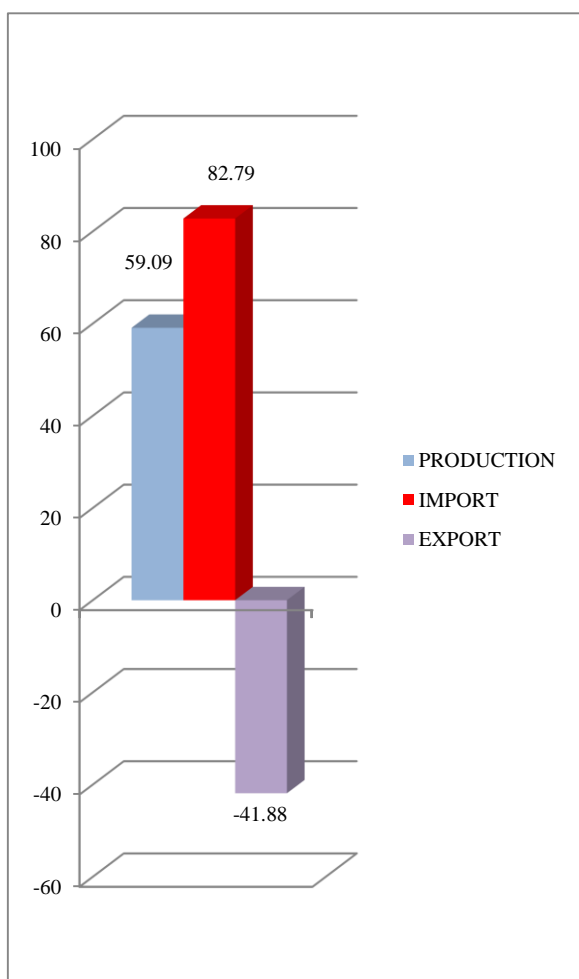

Fig. 1. The total supply - structure, period average (%)

Production decreased by 15.0% in 2010 compared to 2009, after which he recorded in 2011, a slight recovery compared with the previous term of the series dynamic (+ 6.0%).

Average of period, was lower than first reporting base by 8.3%, but surpassed the second by 1.8%.
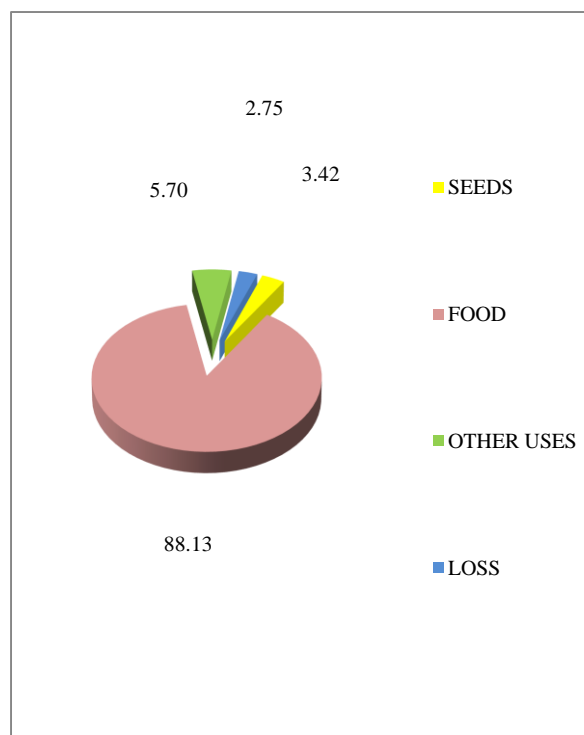

Fig. 2. Total demand - structure, period average (%)

Regarding imports, the rising evolution can be seen even stronger. Such spikes occur in 2010 compared to 2009 (+ 7.5%), and higher growth of 105.7% in 2011 compared to the previous term of dynamic series. Average of period surpasses the first base of reporting 1.42 times, but is inferior to the second by 35.4%.

Romanian exports of barley, has convenient evolved from 2009 to 2011 (annual successive increases of 3.41 times in 2010, respectively 4.20 and 1.23 times in 2011 - compared with the terms of reference). For the average period are found levels of the indices above par for fixed base (2.87 outrunning the base of reporting) and subunit levels for those with mobile base (-31.7%).

In the case of total supply, there is a sinuous evolution, specific declines of 2010 (-37.3%) compared to 2009 followed by increases in 2011 (+16.0 and + 85.1% compared to the terms of reference). In these circumstances the average period was below par compared to both base reporting: -7.1 and -19.9% respectively.

Table 2. Rice: Dynamics of national balance sheet items (2009-2011) *

No.	Specification	YEAR						Average 2009-2011	
		2009		2010		2009			
		I_{bf}	I_{bm}	I_{bf}	I_{bm}	I_{bf}	I_{bm}	I_{bf}	I_{bm}
1	Production	100	100	85.0	85.0	90.1	106.0	91.7	101.8
2	Import	100	100	107.5	107.5	221.1	205.7	142.9	64.6
3	Stock	-	-	100	100	0	0	0	0
4	Export	100	100	341.0	341.0	420.2	123.2	287.1	68.3
5	Total offer	100	100	62.7	62.7	116.0	185.1	92.9	80.1
6	Seed	100	100	93.0	93.0	94.9	102.1	96.0	101.1
7	Food	100	100	57.6	57.6	118.7	206.1	92.1	77.6
8	Other uses	100	100	123.4	123.4	75.4	61.1	99.6	132.1
9	Loss	100	100	73.7	73.7	134.6	182.7	102.8	76.3
10	Total demand	100	100	62.7	62.7	116.0	185.1	92.9	80.1

*own calculation

If we refer to trends consumption of seeds, it can be seen the uneven trend of its, specific decreases by 7.0% in 2010 (compared to 2009), followed by increases in the amount of 2.1% for 2011 - compared to the previous term of dynamic series.

In these circumstances the average period is lower by 4.0% compared to the first term of the dynamic series, but exceed 1.1% specifies the situation of 2011.

At the level of consumption it is worth mentioning uneven progress, decreases by 42.4% in 2010 (compared to 2009), followed by increases of 18.7 and 106.1% in 2011 - compared with the terms of reference (2009 and 2010 respectively). Following this situation, the average period is below par compared to both terms: -7.9 and -22.4% respectively.

Different uses of rice have increased in 2010 compared to 2009 (+ 23.4%), then declined in 2011 compared to both base of comparisons with 24.6 and 38.9%. Average of period was substantially equal to the first comparison term (99.6%) and overtook the second of 1.32 times.

Regarding the losses, it is highlighted uneven developments, decreases in 2010 (-26.3% compared to the specific situation of 2009), followed by increases in 2011 (+34.6 and + 82.7% compared with the terms of reporting). The average period known values above par for fixed base index (102.8%) and subunit values for mobile base index (76.3%).

Regarding the total demand dynamics, there is an uneven trend. Thus, in 2010 demand falls by 37.3% compared to 2009, then in 2011 increased by 1.16 and 1.85 against the terms of reference. Following this situation, the average period is below both bases of reporting by 7.1 and 19.9% respectively.

Graphic evolution total supply and total demand is shown in figure 3 (since the two indicators have identical values).

CONCLUSIONS

Based on this study, the following conclusions could be drawn:

- in terms of components of balance it is worth mentioning equal nature of its situation different from the world and European (characterized by recording surpluses);

- total supply (74,974.66 t) representing 1.79% of the European level of the indicator and is in particular based on imports - 82.79%, but production has a significant share - 59.09%. Are noted exports (-41.88%), which in terms of quantity means almost 75% of imports. The components of total supply, analyzed in a European context were: 1.35% exports, 1.54% production, imports 1.67%;

- total demand, is entered with a percentage contribution of 1.85% in continental level of the indicator. As global and continental, and in Romania the demand structure is dominated by food consumption (88.13% - higher weight than the global and somewhat closer to the continental one). Otherwise, the shares held by other components of total demand were definitely lower: 5.70% other uses, 3.42% seeds and 2.75% losses. If we analyze Romania's contribution to the achievement of the indicators continental levels, weights are found as follows: 1.88% for food, 2.59% in seeds, 3.92% loss;
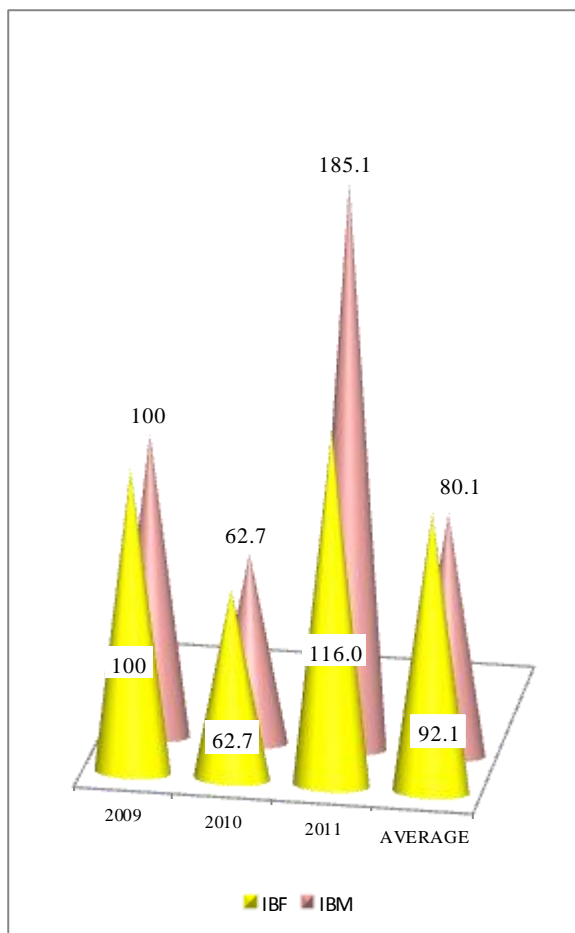
Fig. 3. The dynamics of supply and total demand (%)

- the vast majority of balance sheet items have uneven developments, distinguishing imports and exports showing upward trend strictly;
- for Romania, it should be noted the need for superior capitalization of the existing potential for growing rice (with reference to the extension surfaces) and better administration of component elements total demand - especially increased consumption of raw materials used in industry, reducing losses and enhancing the possibilities for use by finding new outlets of capitalization.

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