THE PRIMARY CORN OFFER OF DOLJ COUNTY (2010-2012), IN THE REGIONAL CONTEXT

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Abstract

The paper refers to the primary supply situation for corn in Dolj County, for 2009-2011, being considered in a regional context. Dolj County appears as main agricultural producer of the region South - West, which is highlighted especially through production potential it holds. Such are the total area and arable noted that it ranks first regionally. Corn is one of the main crops at regional and county level, which has implications in financial indicators in those rural economy.

Keywords: *average production, corn, share, surface, total production*

INTRODUCTION

The importance and benefits of corn production resulting from destination or versatility of its use: forage industrial agricultural technology - technological export article and source of profit for farms [1].

Due to its biological features, and in particular by introducing the culture of hybrids, corn has large production capacity, 6000 - 9000 kg / ha grain in unirrigated areas, 9000-16000 kg / ha and even more to irrigate. It is also resistant to drought and the fall is less attacked by pests and diseases, capitalizes very well irrigation and organic and chemical fertilizers. Corn can be grown on soils and climatic conditions very different is not pretentious to previous plant and supports better than other cereal monoculture. Corn has high coefficient of multiplication, therefore requiring a small amount of seed per hectare, and culture presents great possibilities of mechanization, from sowing to harvesting. [5]

Factors profitability and economic efficiency in the production of corn grains are the average yield per hectare, cost management and trading [3].

Best offer for an 'X' is the quantity that producers are willing to produce to a cost "K" in view of the profit that they will get. It thus becomes important to anticipate which manufacturer rationality in choosing and producing combinations of goods (X1, X2, ... Xn) which gives the maximum return on the resources available [4].

Cereal offer of the country at national level is required both by the need to ensure food security and the desire to trade grain. Seen through the supply of grain, regardless of the historical period under review, the share of cereals in arable crop yields per unit area emphasize the socio-economic function of these crops. This, especially for the fact that is a cereal considered noble, requested at export. The offer includes the factors that determines and are directly correlated with the yields achieved, ie the areas planted and yields per hectare [2].

MATERIALS AND METHODS

The paper realization involved the documentation, through the use of statistical reporting data [6].

In order to realize the paper we use a system of indicators to highlight specific primary supply of corn - area cultivated, total production and average yield. Therefore were collected quantitative data on the volume achieved at regional and county level.

The data collected and analyzed, covers the period 2009-2011, operating with average of period to. Average was determined by computing the following relationship:

$$M = \frac{X_1 + X_2 + \ldots + X_n}{n}$$

RESULTS AND DISCUSSIONS

For Development Region South - West respectively Dolj are trying the establishment of corn primary offer, considering area cultivated, total production and average yield obtained per unit of product - hectare.
In Table 1. are included data for the area cultivated with maize on region of development South - West.
South - West cultivated from 2009 to 2011 an average area of 348397.7 ha maize, the limits of variation of the indicator being of 276369 ha in 2010 and 386455 ha in 2011.

Table 1. South - West Area, Corn – Cultivated Surface (ha)*

Nr. crt.	Year	Effective	Dynamic		% beside national
			Ibf	Ibm	
1	2009	382342	100	100	16.4
2	2010	276396	72.3	72.3	13.2
3	2011	386455	101.1	139.8	14.9
4	Average 2009-2011	348397.7	91.1	90.2	14.9

*http://www.dolj.insse.ro/cmsdolj/rw/pages/R40_Supra fCultivExplPpCult.ro.do

Compared with the first of dynamic series - 2009 (382342 ha), composed dynamics, shows levels both under - and above par to fixed base indices: 72.3% in 2010, 91.1% and 101.1% for average of period in the case of year 2011.
If we relate the regional level of the indicator, by the national area planted with corn, annual percentage contributions can be observed as follows: 13.2% in 2010, 14.9% in 2011, 16.4% for 2009. Under these conditions average of the period held an average share of 14.9% in the national structure of the indicator - fig. 1.
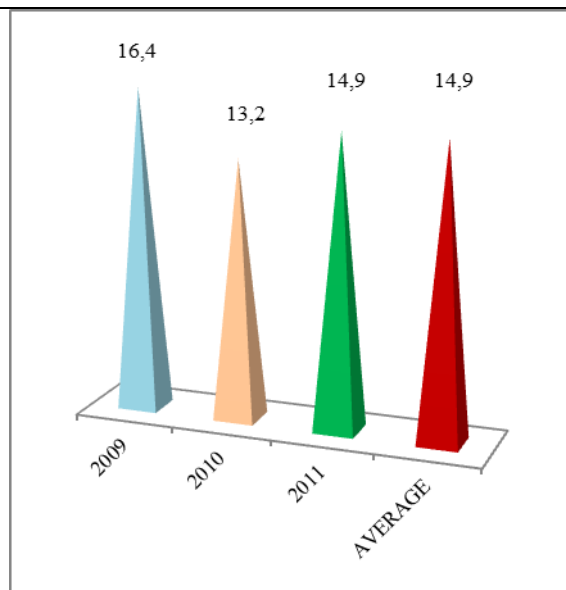

Fig. 1. Corn. South West Region – share in national surface (%)

Data for total production of maize specific the Southern-West Development Region - are presented in Table 2.

Table 2. South-West Development Region, Corn – Total production (t)*

Nr. crt.	Year	Effective	Dynamic		% beside national
			Ibf	Ibm	
1	2009	1453235	100	100	18.2
2	2010	1189394	81.8	81.8	13.2
3	2011	1569294	108.0	131.9	13.4
4	Average 2009-2011	1403974.3	96.6	89.5	14.7

*http://www.dolj.insse.ro/cmsdolj/rw/pages/R43_Prod AgrVegPpCult.ro.do

It may be noted that the total production ranged from 1189394 t in year for 2010 to 1569294 t for 2011. Together, these levels with a quantity of 1453235 t produced in 2009, reaching an interval average of 1403974.3 t (-3.4 and -10.5% compared to the reference bases used for building dynamic - 2009 and 2011 respectively).
In the national production of corn Development Region South - West recorded variables, contribution percentage as follows: 13.25 in 2010, 13.4% in 2011, 18.2% for 2009 and 14.7% the average period - fig. 2.
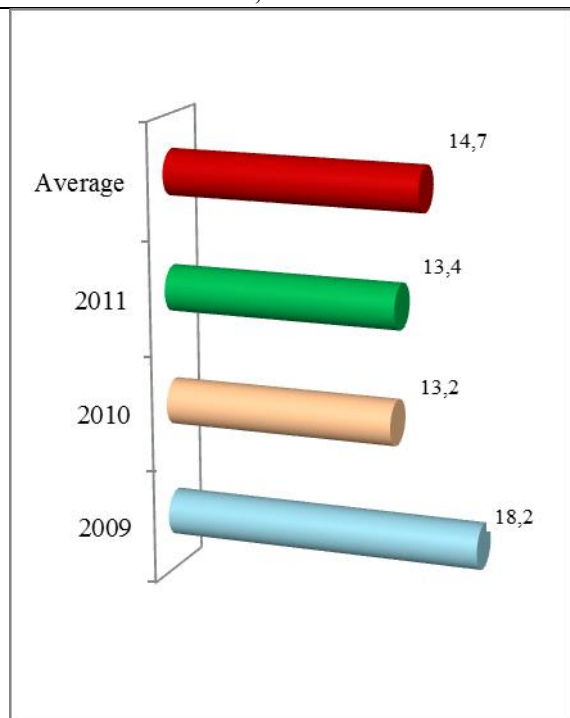
Fig. 2. Corn. South-West Region – share in national production (%)

Based on the total quantities of maize obtained from cultivated areas were determined corresponding average production levels per hectare - at regional level - Table 3.

Table 3. South-West Region, Corn – Average production (kg/ha*)

Nr. crt.	Year	Effective	Dynamic		% beside national
			Ibf	Ibm	
1	2009	3801	100	100	111.2
2	2010	4303	113.2	113.2	99.7
3	2011	4061	106.8	94.4	89.7
4	Average 2009-2011	4030	106.0	99.2	98.4

*http://www.dolj.insse.ro/cmsdolj/rw/pages/R44_Prod MedHectarPrincipCult.ro.do

For the period under review it is found fact that average yield per hectare ranged between 3801kg in 2009 to 4303 kg in 2010, while the average of period reached 4030 kg.
The dynamics contains fixed base indices, strictly above unit - 6.0% for average of period 6.8% in 2011 (4061 kg), 13.2% in 2011 compared to the specific situation of 2009, but also variable levels for mobile based index: 94.4 and 99.2% in 2011 and average of the period 113.2% in 2010.

Analyzing the situation of the South - West, in the national context, it is noted mainly positioning subunit: 89.7% in 2011, 98.4% of the average period 99.7% in 2009, but above par level - 111 25 for 2009. - Fig. 3.
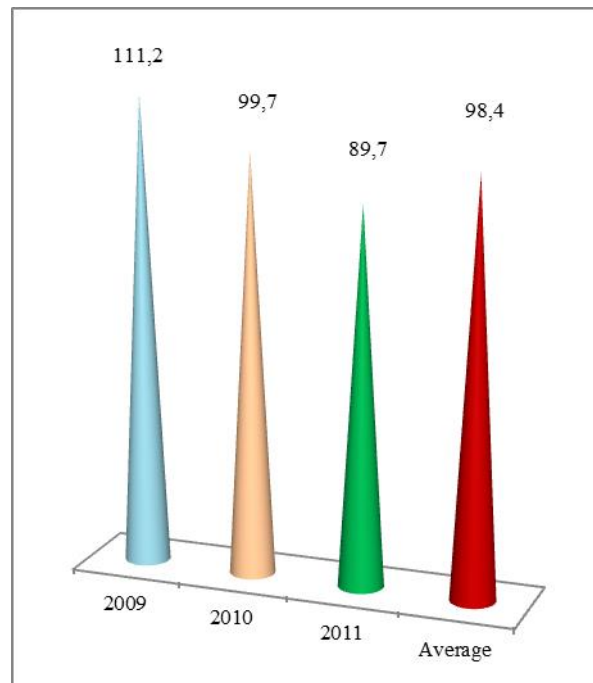

Fig. 3. Corn. South West Region – positioner beside national average production (%)

Analysis of the situation of county area planted with corn, is accomplished by interpreting the data included in Table 4.

Table 4. Dolj County, Corn – Cultivated area (ha)

Nr. crt.	Year	Effective	Dynamic		% beside regional
			Ibf	Ibm	
1	2009	118300	100	100	30.9
2	2010	71725	60.6	60.6	26.0
3	2011	94037	79.5	131.1	24.3
4	Average 2009-2011	94687.3	80.0	100.7	27.2

*http://www.dolj.insse.ro/cmsdolj/rw/pages/j40_SupCu lt.ro.do

The indicator ranged from 71725 ha in 2010 to 118300 ha in 2009 the average period reaching a rate of 94687.3 ha, given that 2012 is characterized by an area of 94037 ha planted with corn.
The dynamics contains strictly sub unitary values for fixed base indices (decreased by 20.0, 20.5 and 39.4% compared to the first

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term of the dynamic series on period average, 2011 and 2010 respectively), and varying levels for mobile based indices (subunit - 60.6% in 2010, and above par - 100.7 and 131.1% for average period 2011).

Compared to the regional situation, Dolj cultivated quite important area with corn.

In the regional structure of the indicator Dolj register with weights as follows: 24.3% in 2011, 26.0% in 2010, 27.2% of the average period, and 30.9% in 2009 - fig. 4.
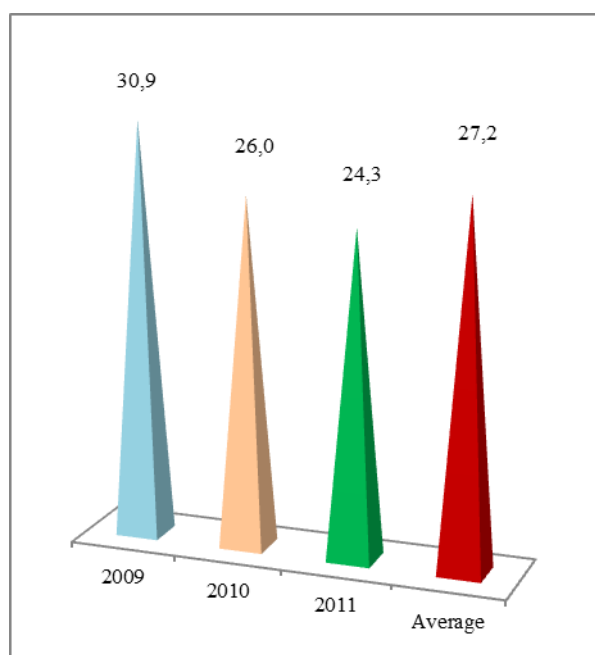

Fig. 4. Corn. Dolj County – share in Regional surface (%)

Regarding the total quantities of maize in Dolj County, for the period 2009 - 2011, data are presented in Table 5.

Table 5.
Dolj County, Corn – Total production (t)*

Nr. crt.	Year	Effective	Dynamic		% beside regional
			Ibf	Ibm	
1	2009	430780	100	100	29.6
2	2010	363491	84.4	84.4	30.6
3	2011	378935	88.0	104.2	24.1
4	Average 2009-2011	391068.7	90.8	103.2	27.9

*http://www.dolj.insse.ro/cmsdolj/rw/pages/j43_ProdVeget.ro.do

The amount of corn ranged from 363491 t in 2010 to 430780t in 2009.

Under these conditions, in conjunction with the level of 378935 t in 2011, the average period reached 391068.7 tons

Evolution in time of the indicator is emphasized through mobile and fixed base indices that make up the dynamic. It observes the strict subunitary levels of indices with fixed base (-15.6, -12.0 and -9.2% in 2010, 2011 and for period average). Indexes with movable bases are below par in 2010 (84.4%), but for the remaining terms are above unit (exceeding by 1.03 and 1.04 times the terms of comparison to average of period for 2011).

In the regional context, Dolj obtained between 24.1 and 30.6% of total production of corn (2011 and 2010), in which the average weight was 27.9% - Fig. 5.
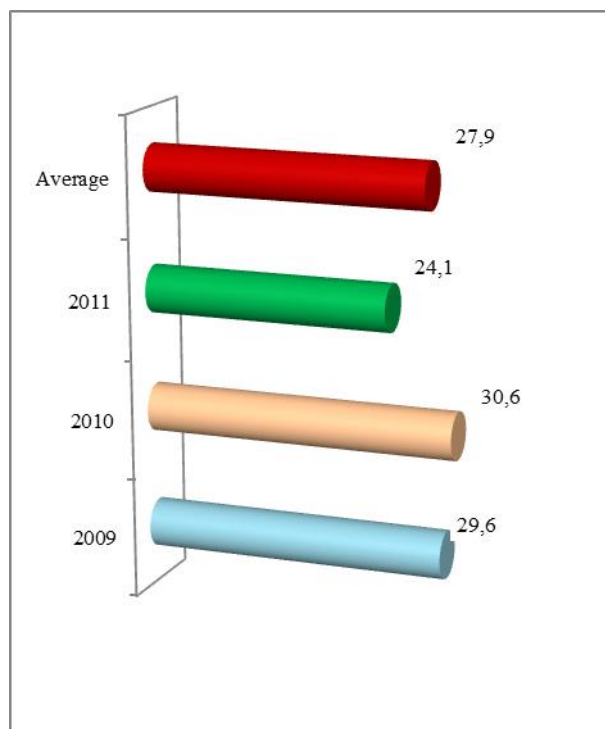

Fig. 5. Corn. Dolj County – share in regional production (%)

Table 6 provides information on the average yields per hectare obtained in Dolj County for maize during the period.

For interval, it is found the fact that average yield per hectare ranged between 3641 kg in 2009 and 5068 kg in 2010.

Adding to these levels the specific on of the year 2011 - 4030 kg has been determined that the average for the period under review has reached 4130 kg.

Dynamics of indicators consists mainly of constituents with above par value, except the indexes with movable bases for year 2011 - 79.5%.

Table 6. Dolj County, Corn – Average production (kg/ha)*

Nr. crt.	Year	Effective	Dynamic		% beside regional
			Ibf	Ibm	
1	2009	3641	100	100	95.8
2	2010	5068	139.2	139.2	117.8
3	2011	4030	110.7	79.5	99.2
4	Average 2009-2011	4130	113.4	102.5	102.5

*http://www.dolj.insse.ro/cmsdolj/rw/pages/j44_ProdMedCult.ro.do

Outruns of the comparison were 1.39 times in 2010, 1.10 times for 2011 (compared to the first term of the dynamical series), 1.13 and 1.02 times the average period. Dolj situation analyzed in the regional context, emphasizes positioning both above and below the comparator - fig. 6.
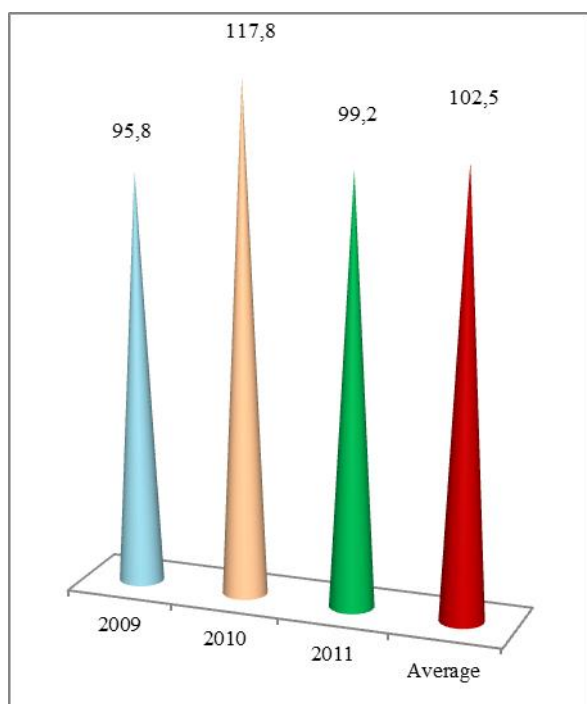

Fig. 6. Corn. Dolj County – positioning beside the average production of the region (%)

Thus recorded subunitary levels in 2009 and 2011 (-4.2 and -0.8% respectively), and levels above par in 2010 and for average of the period (17.8 and 2.5% respectively).

CONCLUSIONS

Regarding import situation appear as conclusions the following:
a. regarding regional situation:
- the surface Has evolved uneven, corn holding 33.64% and 44.21% of the arable land in the area occupied by grains (1035785.3 respectively 788057.7 ha); maize appears, from this point of view, as a second crop as potential after wheat occupying 48.47% (381989 ha) of the area cultivated with cereals;
- total production of corn has evolved fluctuating decreases in 2010 being followed by increases in 2011;
- maize contributed with 54.15% to constitution of cereal total production - 2592532 t as a result, corn is the main cereal product of the region, followed by wheat with a share of 40.45% in total (1048778.3 t) ;
- average yield has evolved unevenly increases in 2010 (13.2%), followed by declines in 2011 (-5.6%);
b. concerning the county situation:
- corresponding surface of the maize crop has evolved fluctuant over the period analyzed, the decreases from 2010 (-39.4%), being followed by increases in 2011 (31.3%);
- maize (94687.3 ha) took 23.29 and 32.18% of the arable land and respectively from area occupied by cereals - 406531.3 and 294244 ha;
- corn ranked second after wheat was cultivated on 177971 ha - 60.48% of the area cultivated with cereals;
- total production of corn has evolved uneven manifesting decreases in 2010 (-15.6%) and increased in 2011 (4.2%);
- in the county production of cereal (935852.7 t), maize owned 41.79% being overtaken by wheat with a share of 52.24% (488848 t);
- the average production per hectare has fluctuated the increases of 39.2% in 2010, being followed by declines in 2011 (-20.5%).

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