

STUDY ON THE DEVELOPMENT OF ROMANIAN AGRICULTURE AFTER ACCESSION TO THE EUROPEAN UNION

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Abstract

Romania has joined the European Union on January 1st 2007. In the last 10 years, a lot of changes have taken place in the Romanian economy, including in agriculture - generated by the Common Agricultural Policy.

The authors referred, on the basis of statistical information, to some changes that have taken place in Romania's agriculture, such as: changing the ownership system in favor of private property, in accordance with the Land Fund Act; reducing of employment in agriculture; increasing the number of agricultural units and their size - both in plant and animal husbandry; the use of new varieties and hybrids, having superior productivity, improved and adapted to the pedoclimatic conditions in Romania; introduction of new breeds and hybrids - in animal husbandry; the use of modern production technologies with a high level of mechanization and automation; obtaining better agricultural output than in 2017; increasing the incomes of the employed population in agriculture; rural tourism development.

Key words: U.E. accession, evolution, agriculture, animal husbandry, Romania

Together with the accession of Romania to the European Union, the enforcement of the provisions registered in the Joint Agricultural Market regarding agriculture is required.

One of the provisions refers to the strategy for the assurance of the population with the needs for the agri-food consumption in the context of the integration into the European Union, by the superior capitalization of the existing agricultural potential, the implementation of certain market-specific and distribution strategies, based on the enforcement of certain efficient production technologies (new species and hybrids, technologies based on mechanization and automation, phytosanitary and zoo-veterinary protection, application of irrigations, animal diet, and so on).

The needs for food are at the basis of the Maslow pyramid (Niculescu Maria *et al*, 1999; Tofan A., 2002) – being included in the stringent, basic needs. For human diet, cereals ensure approximately 65% of the daily need for calories and 45% of proteins (Petrache I.A., 2003).

The level and structure of food consumption depend on economic factors (income policy, monetary policy, social services policy), social

factors (degree of urbanisation, infrastructure of the rural area, occupational diversification, access to information and so on), demographic factors (level of training, population structure per ages, degree of ageing, employment rate, and so on) (Petrache I.A., 2004; Otiman I.P., 2000; Avarvarei I. *et al*, 1997; Cucui I., 1996; Davidovici I., 1993; Gîndu Elena, 2006).

MATERIAL AND METHOD

The volume of information was based on the use of several methods of investigation: office researches - based on existing statistical data, statistical analyses, causal (explanatory) researches, periodical (annual) researches.

The methods of research were based on **the investigation of statistical sources** and on **direct research** (observation, consumption physiological rules, regulatory consumption budgets, family budgets).

RESULTS AND DISCUSSIONS

An aspect analysed also referred to the dynamics and structure of the population occupied in agriculture (*table 1*).

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Table 1

The evolution of the Romanian population occupied in agriculture - by professional status

Specification	U.M.	2012	2015
The total population employed in agriculture, out of which:	thousands of people	8645.3	8525.7
The population employed in agriculture, out of which:	thousands of people	2649.4	2251.1
	% of total	30.6	26.4
	% 2012	100.0	85.0
-employees	thousands of people	298.9	266.6
	% of total	11.3	11.8
- independent workers	thousands of people	2350.5	1984.5
	% of total	88.7	88.2

From the data presented it results that the population occupied in agriculture decreased by 15% but the share is pretty high, almost 90% being independent workers (I.N.S., 2017).

The structure of the daily average food consumption per inhabitant followed an ascending trend (table 2).

Table 2

The daily average food consumption per inhabitant registered in Romania

Specification	U.M.	2011		2016		% față de 2011
			% din total		% din total	
Calories, of which:	nr.	3390	100.0	3467	100.0	100.3
- of animal origin	nr.	857	25.3	918	26.5	107.1
- of vegetable origin	nr.	2533	74.7	2549	73.5	100.6
Proteins, total of which:	grams	110	100.0	112.3	100.0	102.1
- of animal origin	grams	53.4	48.5	58.4	52.0	109.4
- of vegetable origin	grams	56.6	51.5	53.9	48.0	95.2
Lipids – total of which:	grams	104.3	100.0	113.6	100.0	108.9
- of animal origin	grams	154.6	52.3	58.6	51.6	107.3
- of vegetable origin	grams	49.7	47.7	50.0	48.4	100.6
Glucides	grams	481.4	100.0	470.1	100.0	97.7

Source: Anuarul Statistic al României, I.N.S., 2017

Thus, in 2016 in comparison with 2011, the following increases were recorded:

- 7.1 % - in animal -origin calories;
- 9.4 % - in animal-origin proteins;
- 8.9 % - in lipids – total;

- 7.3 % - in animal -origin lipids.

Increases were also recorded in the vegetable production (with the exception of protein consumption), but with lower values.

Table 3

The evolution of the cultivated surface and the total production of the main cultures in Romania, between 2011-2016

Culture	Cultivated surface				Total production		
	2011		2016		2011	2016	% /2011
	thousands ha	%	thousands ha	%	thousands tons	thousands tons	
The cultivated surface - total, of which:	8081.6	100.0	8409.2	100.0	-	-	-
Wheat and rye	1959.4	24.2	2148.2	25.5	7163	8457.1	118.1
Barley and two-row barley	419.5	5.2	481.6	5.7	1329.7	1817.3	136.7
Oat	185.3	2.3	170.3	2.0	275.9	381.4	138.2
Corn beans	2589.7	32.0	2581.0	30.7	11717.6	10746.4	91.7
Shelling peas	28.7	0.4	73.2	0.5	55.1	78.8	143.0
Beans	13.1	0.2	14.9	0.2	21.4	19.1	89.3
Potatoes - total	242.6	3.0	182.2	2.2	4076.6	2689.7	66.0
Sugar beet	18.8	0.2	24.9	0.3	660.5	1012.2	153.2
Sunflower	995.0	12.3	1039.8	12.4	1789.3	2032.3	116.9
Rape	392.7	4.9	456.0	5.4	739.0	1292.8	174.9
Soy beans	72.1	0.9	127.3	1.5	142.6	263.4	184.7
Alfalfa	344.3	4.3	380.2	4.5	6015.8	5505.2	91.5
Clover	123.2	1.5	107.0	1.3	2001.7	1521.7	76.0
Other cultures	695.7	8.6	650.7	7.8	-	-	-

Source: Anuarul Statistic al României, I.N.S., 2017

Aspects regarding the evolution of cultivated surfaces and of the total production highlighted the following (*table 3*):

- the cultivated surface increased by 4.1%, the highest increases being registered in the following cultures: shelling peas (50.5%), sugar beet (32.4%), rape (16.3%), barley and two-row barley (14.8%), alfalfa (10.4%), wheat and rye (9.6%);
- in the structure of the cultures in the cultivable land, the bean cereals occupy 63.7%, sunflower - 12.4%, bean leguminous - 0.7%, alfalfa - 4.5% and in potatoes, clover and oats - the share from the cultivated surface was lower than in 2011;
- the total production was significantly increasing, recording between 18.1% - in wheat and rye and 84.7% - in soy beans, and in corn beans, beans, potatoes, alfalfa and clovers, the total production decreased: - 34% in potatoes - total (maximum) and -8.3% in corn beans (maximum).

Important modifications also took place in the field of animal breeding (*table 4 and table 5*).

sheep meat	live weight			
	% of total	8.1	7.8	-
-poultry meat	thousands of tons of live weight	477	555	116.4
	% of total	35.2	37.9	-
-cow milk buffalo milk, sheep milk, goat milk - total	thousands of hl	50074	48133	96.1
-wool - total	tons	19026	22277	117.1
-eggs, of which:	mil. pieces	6327	6182	97.7
-chicken eggs	mil. pieces	6086	6060	99.6
-honey	tons	24127	21202	87.9
-pește	tone	11593	23180	199.9

Source: *Anuarul Statistic al României, I.N.S., 2017*

In the analysed period, with the exception of swine, horses and fowls, where the total decreased, in goats, sheeps and bovines, the trend was positive: +20% - in goats (maximum) and +3.1% in bovines (minimum).

From the analysis of the evolution of animal production, significant increases were determined in fish (+99.9%), wool (+17.1%), poultry meat (+16.4%), swine meat (+5.6%) and goat and sheep meat (+3.6%), and in the other products the decreases fell within -0.4% - in chicken eggs (minimum) and -12.1% - in honey (maximum).

On the whole, the total meat production was superior to 2011, by 8.0%.

Moreover, the structure of the agricultural production per branches changed regarding the increase in the share of animal production, from 28.5% in 2011 to 33.6% - in 2016 and of agricultural services (from 0.7% to 1.3%), against vegetable production, which decreased from 70.8% to 65.1%.

At the same time, the share in the production of grapes obtained from grafted vines in production and hybrid vines in production (from 0.57 to 0.43 - in 2011 and from 0.61 to 0.39 in 2016) has also improved.

The technical facilities also changed, both quantitatively and regarding the quality of the mechanised means (physical tractors: +12.7%, combine harvesters for cereals and fodder: +8.1 %, etc.).

All the aspects briefly presented prove the fact that after Romania's accession to the European Union, in our country's agriculture significant changes occurred, in compliance with the measures for the integration into the European Union (Petrache I.A., 2004; Sima Elena, 2003a,b; Știrbu Verona, 1998; Avarvarei I *et al*,1997; Drăgănescu C., 2000; Petrache I.A., 2003).

Table 4
The evolution of animal stock by species in Romania between 2011-2016

Specification	U.M.	2011	2016	% in comparison with 2011
Bovines – total	thousands heads	1989	2050	103.1
Swine – total	thousands heads	5364	4708	87.8
Sheeps – total	thousands heads	8533	9875	103.6
Goats – total	thousands heads	1236	1483	120.0
Fowls – total	thousands heads	596	520	87.2
Horses – total	thousands heads	79842	75690	94.8

Source: *Anuarul Statistic al României, I.N.S., 2017*

Table 5
The evolution of animal production on branches registered in Romania between 2011-2016

Specification	U.M.	2011	2016	% in comparison with 2011
Meat – total, of which:	thousands of tons of live weight	1357	1465	108.0
-bovines meat	thousands of tons of live weight	212	206	97.2
	% of total	15.6	14.1	-
-swine meat	thousands of tons of live weight	557	588	105.6
	% of total	41.0	40.1	-
- goat and	thousands of tons of	110	114	103.6

CONCLUSIONS

After Romania's accession to the European Union, in Romania's agriculture several changes have occurred, in compliance with the Joint Agricultural Policy, such as:

- enforcement of a strategy for the assurance of the population with the needs for the agri-food consumption, by the superior capitalization of the existing agricultural potential, the implementation of certain market-specific strategies based on the introduction of certain efficient production technologies, both in the vegetable production and in animal breeding;
- improvement of the level and structure of food consumption by enforcing the policy (income, monetary and social service) and the influence of social and demographic factors;
- decrease of the population occupied in agriculture
- from 30.6% (in 2012) to 26.4% (in 2015);
- increase of the cultivated surface in the cultivable land by 4.1% out of which soy beans (by 76.6%), peas (by 50.5%), sugar beet (by 32.4%), rape (by 16.3%), barley and two-row barley (by 14.8%), alfalfa (by 10.4%), wheat and rye (by 9.6%);
- increase of vegetable production, which was recorded between 18.1% (in wheat and rye) and 4.7% (in soy beans);
- increase in the total of animals in goats, sheep and bovines and of animal production in fish (+99.9%), wool (+17.1%), poultry meat (+16.4%), swine meat (+5.6%) and goat and sheep meat (+3.6%);
- increase in the share of animal production, from 28.5% (in 2011) to 33.6% (in 2016), against vegetable production (from 70.8% - in 2011 to 65.1% in 2016);
- the share in the production of grapes obtained from grafted vines in production, in comparison with hybrid vines in production, from 57% to 43% (in 2011), to 61% and 39% (in 2016) has also improved.
- the technical facilities of agricultural units changed both quantitatively (+12.7% - in physical tractors, +8.1% in combines for the harvesting of cereals and fodder, etc.)

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