

EVOLUTION OF THE AGRICULTURAL PRODUCTION IN GALAȚI COUNTY AFTER ROMANIA'S ACCESSION TO THE EUROPEAN UNION

Chiran Aurel*, Dima F.L.M.**, Gîndu Elena*, Jităreanu A.F.*, Ungureanu G.*

* University of Agricultural Sciences and Veterinary Medicine Iași, Romania

** Agricultural Chamber of Galați, Romania

Abstract

After joining the European Union, Romanian agriculture targeted to adapt to the European model, which is based on competitiveness, orientation towards market, environmental protection, integration with the environment and forestry, etc.

Farms that adopt this system have the advantage of experiencing lesser price fluctuations and therefore reduces the risk of bankruptcy.

Competitiveness in agriculture can be achieved by developing multi-activity farms, market-oriented, by their association and cooperation and by access to grants in order to make the necessary investments in farms and processing units.

As an economic sector, agriculture plays an important role in the county of Galați, due to the big network of rivers that crosses the county and allows the practice of intensive agriculture. This is due to the great agricultural potential that Galați has, on which agricultural producers, with the support of central and local authorities, are trying to capitalize fully.

To achieve the above objectives, the Common Agricultural Policy supports the agricultural activities of the member countries, by awarding grants based on projects.

In Galați county, most projects were submitted according to the following measures: 112 - Setting up of young farmers; 141 - Supporting semi-subsistence farms and 312 - Support for the creation and development of micro- enterprises.

These measures have a small project value, which demonstrates the need for financial support of small firms by the state through agricultural policies.

In the structure of agricultural land in the county of Galați, arable land holds the largest share (about 87 %), of which 99.64 % belongs to the private sector. Cultures with the highest share of the arable land are cereals grains (66.85 %) and oil plants (23.32 %).

Among the main crop groups, the highest average yields were recorded for fodder plants (48.7 tons green matter / ha), melons (26.1 tons / ha), vegetables (25.3 tons / ha) and potatoes (14.4 tons / ha). Effects of prolonged drought, with excessively high temperatures, above the biological resistance of plants, led to calamity of large areas of cultivated land in 2007 and 2009.

The main animal species in Galați county are: cattle (over 44 thousand heads), pigs (over 74 thousand heads), sheep (over 250 thousand heads), poultry (about 7 million heads) etc. The highest increases were registered in goats and sheep, while the cattle and horse herds decreased significantly.

Sales prices of agricultural products have registered changes from year to year according to the yields that were achieved, expenditures, expected profit etc. In the plant sector, on average, the highest incomes were obtained from wine grapes and field tomatoes, while in the production of meat, pig and poultry have been in front places.

The rise of economic efficiency in the plant and animal breeding sectors can be achieved by increasing average yields, improving product quality, expansion of storage facilities (because using them enables farmers to market the products at a higher price), increasing investment by accessing E.U. grants and bank loans, etc.

Key words: agriculture, investments, economical efficiency.

INTRODUCTION

Among the problems that the Romanian agriculture is facing after the E.U. adherence we mention: climate change in recent years (droughts, floods, landslides), not using the full capacity of the productive agricultural land, the existence of gaps in the farms' size, inadequate crop structure in arable land, herds and livestock production reduction, depopulation and aging population in rural areas, price volatility of raw materials and finished products, the poor development of the tertiary sector, poor infrastructure, gap between agriculture and scientific research due to the lack of knowledge transfer through continuing training of the farmers etc.

In 2007-2013 the development of agriculture and rural areas benefited from the support received from E.U. structural funds through grants, based on projects developed by farmers from the Romanian agriculture.

Under the National Rural Development Programme 2007-2013, agriculture has more opportunities, such as:

- availability of a large market, in full development, both domestically and in Europe, which could be exploited (including organic and traditional products);
- potential to combat climate change through the development and increased use of renewable energy sources, including the production of biofuels from biomass, both from agriculture and forestry;
- vertical coordination between processors of agricultural products, chain supermarkets and farmers;
- potential to improve natural resource management training and advice, focused on environmental protection;
- capitalization of financial support granted by NRDP implementation of local development strategies and local governance etc.

All these aspects are found in Galați county agriculture.

The authors targeted to highlight the changes that have occurred in Galați county's agriculture between 2007 and 2012, compared to 2006, before joining the European Union.

MATERIAL AND METHOD

The study was conducted on the Galați county's agriculture and covered the period of 2006-2012.

To highlight the most significant issues that occurred after Romania's adherence to the E.U., a synthetic indicators system has been used, among which we mention:

- arable land structure in the main crop groups;

- average and total production of the main crops;
- the average total production per animal fodder;
- costs of production and unit cost for main agricultural products.

RESULTS AND DISCUSSION

In Galați county, averaged over the period 2007-2012, there were no significant changes in the arable land crop structure, except vegetables, whose area doubled (Table 1).

Over 90% of the arable land was occupied by cereal grains (67.5 to 7.4%) and oil plants (23.0 to 23.6%).

Evolution of the average production per hectare has been fluctuating, with a tendency to decrease, so that the 12 cultures that were examined, only soybeans, tomatoes and melons have achieved a higher production than the reference year of 2006, while in other cultures decreases have ranged from - 4.6%, for rape and - 37.8% for apples (Table 2).

On average during 2007-2012, according to the oscillations recorded for cultivated areas and average yields per hectare, total production was lower than in 2006, with an amplitude variation between -3.1% for melons, - 62, 8% for fruits (Table 3).

In animal husbandry, compared to 2006, total production evolution showed an increasing trend only for total meat and wool, while for the other analyzed products, the trend has been descending (Table 4).

Average production per fed animal had a downside evolution, as, from 2006, only for live meat (sheep and poultry), sheep milk and wool growth increases were reported. For the other analyzed products, average yields were lower, with a margin of variation between - 2.6%, for live meat bovines and - 45.3% for goat milk (Table 5).

Production costs, influenced by inflation rate and rising purchase prices of feed, fuel and other materials, have been on an upward trend, the largest increases being recorded in maize (185.6%) and the lowest in potatoes (10.2%) (Table 6).

Table 1

The arable land structure for the main crop groups in the county of Galați, during 2006-2012

Year	Cereal grains - ths. ha	Grains - ths. ha	Potatoes - ths. ha	Field + solarium vegetables - ths. ha	Melons - ths. ha	Oil plants - ths. ha	Plants for other industries - ths. ha	Medicinal and aromatic plants - ths. ha	Grains and seed crops - ths. ha
2006	160,4	1,9	2,2	4,1	4,7	56,2	0,15	2,5	5,8
% of arable	67,4	0,8	0,9	1,7	2,0	23,6	0,06	1,1	2,4
2007	148,2	2,2	2,4	8,2	3,8	54,9	0,02	0,5	6,4
2008	180,7	2,1	2,1	7,8	3,9	55,9	0,11	2,4	7,7
2009	176,3	2,4	2,1	8,0	5,4	60,9	0,02	1,3	8,1
2010	175,4	2,3	1,9	7,9	4,5	65,4	0,06	4,0	4,4
2011	177,5	1,9	1,9	8,6	4,0	68,5	0,18	1,5	4,3
2012	197,0	1,5	1,4	8,2	3,6	54,1	0,48	1,1	4,1
Average	175,9	2,1	2,0	8,1	4,3	60,0	0,15	1,8	5,9
% of arable	67,5	0,8	0,8	3,1	1,7	23,0	0,06	0,7	2,3
% / 2006	109,7	110,5	90,9	197,6	91,5	106,8	100,0	72,0	101,7

Table 2

The average yield per hectare of the main crops in the county of Galați during 2006-2012-t/ha

Year	Wheat	Corn	Pota-toes	Sun-flower	Rape	Soy	Sugar beet	Tomatoes	Alfalfa	Apples	Wine grapes	Melons
2006	2,5	3,4	15,9	1,4	1,3	1,4	26,4	20,6	27,5	8,2	6,3	22,6
2007	1,2	0,7	13,4	0,6	1,0	1,2	-	28,6	14,6	2,5	4,9	21,3
2008	3,4	2,6	13,2	1,3	1,6	2,4	18,6	30,6	27,3	8,5	4,2	27,5
2009	1,8	2,0	13,6	1,2	0,9	2,6	-	28,3	51,1	1,7	4,4	27,6
2010	2,1	3,8	15,9	1,6	1,3	3,4	-	28,6	20,9	6,4	3,6	31,4
2011	3,0	3,6	14,6	1,5	1,6	2,7	26,6	29,7	18,8	2,2	4,2	22,5
2012	1,1	0,9	7,2	0,9	1,0	2,5	29,7	15,6	9,7	6,3	2,8	13,2
Average	1,8	2,4	13,4	1,2	1,24	2,32	25,0	26,0	24,3	5,1	4,4	23,7
% / 2006	72,0	70,6	84,3	85,7	95,4	165,7	94,7	126,2	88,4	62,2	69,8	104,9

Table 3

Aggregate production of the main crops in the county of Galați in 2006-2012 - tonnes

Product	2006	2007	2008	2009	2010	2011	2012	Average 2007-2012	% / 2006
Grains	494839	125407	526199	328730	523781	583159	187890	379194	76,6
Potatoes - total	34943	31706	28292	28086	30498	26957	9593	25855	74,0
Field + solarium vegetables	183509	149190	165482	168572	163602	179423	112066	156389	85,2
Melons	105536	80140	108024	148317	141100	88764	47458	102301	96,9
Wine grapes	85126	67254	66474	63127	53834	61992	42183	5914	69,5
Fruits	23085	1792	19577	9059	15441	2811	2822	8584	37,2

Table 4

Total production between 2006 and 2012 for the main animal products

Product	M.U.	2006	2007	2008	2009	2010	2011	2012	Average 2007-2012	% / 2006
Meat - total	tons (live)	24557	26561	27647	27010	29109	29824	37212	29561	120,4
Milk - total	ths. hl	917,6	876,9	853,7	867,0	873,7	833,2	855,8	860,1	93,7
Wool	tons	612	683	705	710	750	905	890	774	126,5
Honey	tons	570	500	440	460	500	450	280	438	76,8
Eggs	mil. pieces	178,7	144,9	136,4	144,0	154,8	127,9	154,2	143,7	80,4

Table 5

The average yields per fed animal made in Galați county during 2006-2012

Specification	M.U.	2006	2007	2008	2009	2010	2011	2012	2012/2006 - %
Bovines - meat in live	Kg/head	418	418	395	423	400	429	407	97,4
Sheep - meat in live	Kg/head	22	20	20,3	21,2	21,2	22	26	118,2
Swine - meat in live	Kg/head	130	120	120	117	122	114	109	83,8
Poultry - meat in live	Kg/head	2,18	2,05	2,16	2,91	3,00	3,1	2,9	133,0
Cow milk	L/head	3425	3752	3442	4933	4086	3680	3429	100,1
Sheep milk	L/head	42	39	45	53	52	55	55	131,0
Goat milk	L/head	382	307	271	312	183	193	209	54,7
Wool	Kg/cap	3,05	3,46	3,55	3,23	3,50	3,5	3,3	108,2
Honey	Kg/fam.	26,4	25,0	17,6	20,9	21,7	22,5	17,5	66,3
Eggs	Pieces/head	160	132	152	147	134	122	146	91,3

Table 6

Costs of production for main agricultural products in Galați

Culture / product	M.U.	2006	2007	2008	2009	2010	2011	2012	% / 2006
Wheat	lei/ha	825	1100	1208	1389	1445	1462	1485	180,0
Corn	lei/ha	756	969	1089	1328	1386	1398	1403	185,6
Sun-flower	lei/ha	736	909	1045	1259	1303	1312	1326	180,2
Sugar beet	lei/ha	950	-	-	-	-	1520	1618	170,3
Potatoes	lei/ha	7327	7833	7788	8036	8064	8112	8074	110,2
Rape	lei/ha	869	674,5	1280	1285	1288	1295	1297	149,3
Soy	lei/ha	950	821	1656	1674	1682	1693	1711	180,1
Tomatoes	lei/ha	1862	1970	2030	2062	2171	2193	2230	119,8
Melons	lei/ha	724	832	1315	1360	1411	1435	1442	199,2
Alfalfa	lei/ha	947	968	1004	1018	1102	1136	1251	132,1
Apples	lei/ha	582	636	714	812	832	850	888	152,6
Wine grapes	lei/ha	2559	3004	3295	3764	3947	4172	4198	164,0
Bovine meat	lei/kg	2,85	3,15	3,32	3,85	4,05	4,07	4,08	143,2
Swine meat	lei/kg	3,72	3,91	4,3	4,39	4,57	4,50	5,01	134,7
Poultry meat	lei/kg	3,45	3,74	4,4	4,6	4,69	4,71	4,72	136,8
Cow milk	lei/l	0,58	0,71	0,78	0,82	0,82	0,87	0,91	156,9
Consumption eggs	lei/piece	0,20	0,23	0,29	0,41	0,43	0,4	0,35	175,0

CONCLUSIONS

1. Romania's adherence to the European Union has not brought a recovery in agriculture, which is also observed in Galați county, hence access and use of grant funds had a low share and the association of agricultural land owners is quite slow, the number of membership units, both nationally and in Galați county is insignificant and on a descending path.
2. In Galați county's agriculture, there were no essential changes to the pre-adherence period. In the crop structure, cereal grains occupy about 70 % and oil plants, over 23 %, while the share of other cultures is quite low.
3. The average obtained yields are quite reduced and there is still an obvious gap compared to developed countries in the European Union, even if the cost of production per hectare or for main products (including animal) have risen very much.
4. Measures for promoting a greater number of projects for accessing European funds are necessary, targeting to improve production technologies in plant and animal breeding, and especially to accelerate cooperation and integrated development of agricultural production.

REFERENCES

1. Chiran A., Bîzu C.L., Gîndu Elena, Drobotă Benedicta, 2009, *Consideration on the evolution of agricultural vegetal production in Botoșani county after 1989*. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, vol. 66(2).
2. Chiran A., Cîmpanu M.B., Gîndu Elena, Jităreanu F.A., 2013, *Posibilități de dezvoltare și eficientizare a producției agricole din județul Botoșani prin atragerea fondurilor structurale (studiu de caz la S.C. AGROMEC DRAGALINA S.R.L., jud. Botoșani)*. Lucr. șt. U.S.A.M.V. Iași, vol. 56, seria Agronomie.
3. Dima Fl.M., 2008, *Studii privind dezvoltarea agriculturii din zona agroeconomică Galați, în contextul integrării României în Uniunea Europeană*. Teză de doctorat.
4. Dumitru M., Diminescu D., Lazea V., 2004, *Dezvoltarea rurală și reforma agriculturii românești*. Institutul European din România, Colecția de studii I.E.R. nr. 10-11, București.
5. Gavrilescu D., 2002, *Restructuring and transition of agrifood sector and rural areas in Romania*. Expert Publishing House, Bucharest.
6. Gîndu Elena, Dima Fl.M., Chiran A., Drobotă Benedicta, 2009, *Revitalization Measures of Vegetal Agricultural Production in Galați Agro-economical Area by Attracting European Funds*. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, vol. 66(2).
7. Goșa V., 2000, *Sisteme de finanțare a agriculturii*. Editura Mirton, Timișoara
8. Hera C., 2004, *Agricultura României în contextul integrării în Uniunea Europeană*. Revista Agricultură României, vol. 15, nr. 3, București.
9. Iosip C.D., Rușeț V., 2008, *Managementul dezvoltării spațiului rural prin programe de finanțare - Management de proiect*. Editura Solness, Timișoara.

10. Iuroaea Gh., 2011, *Studii privind influența Politicii Agricole Comune – Pilonul I – asupra dezvoltării și eficientizării agriculturii din zona de sud a județului Galați*. Teză de doctorat.
11. Man E.T., 2008, *Managementul dezvoltării spațiului rural prin implementarea politicilor europene, naționale și regionale*. Editura Politehnica, Timișoara.
12. Neagoe I., 1997, *Optimizarea surselor de finanțare a activității întreprinderii – în volumul "Mecanismele și instituțiile economiei de piață"*. Editura Universității "Al. I. Cuza", Iași.
13. Oancea M., 2003, *Managementul modern în unitățile agricole*. Editura CERES, București.
14. Otiman, P.I., 2000, *Restructurarea agriculturii și dezvoltarea rurală a României în vederea aderării la U.E*. Editura Agroprint, Timișoara.
15. Petrache I.A., 2004, *Agricultura României și integrarea în U.E*. Revista Tribuna economică, nr. 33, București.
16. Rusu M., 2005, *Dezvoltarea rurală, politici și structuri economice*. Editura Expert, București.
17. Viorică Viorela-Camelia, 2013, *Studii privind proiectarea și implementarea strategiilor de dezvoltare a agriculturii județului Galați prin aplicarea măsurilor de finanțare în concordanță cu Planul Național Strategic 2007-2013*. Teză de doctorat.
18. Zahiu L., Dachin Anca, 2007, *Perspectivile dezvoltării agricole și rurale în procesul de implementare a Politicii Agricole Comune*. Revista Economie și administrație locală, vol. 12, nr. 1, București.
19. * * *, 2006, *Studii strategice și politici. Studiul nr. 5 "Scenarii privind impactul măsurilor de dezvoltare rurală asupra structurilor agricole românești după aderarea la Uniunea Europeană"*. Institutul European din România, București.
20. * * *, 2008, *Planul Național Strategic pentru Dezvoltare Rurală 2007-2013, versiunea actualizată 03.XI.2008*, București.