

## ANALYSIS OF THE OPERATING STRUCTURES EVOLUTION IN THE NORTHWEST REGION DURING 2005- 2007- 2010

Morna Anamaria\*

\*University of Oradea, Faculty of Environmental Protection, Gen.Magheru St., No.26, 410048, Oradea, e-mail: [amorna@uoradea.ro](mailto:amorna@uoradea.ro)

### Abstract

*“The process of adhesion to the European Union caused major changes in the economy and society by accelerating the transition to a functioning market economy, an openness to international environment through progressive liberalization of movement of goods, persons, capital and services through business development in a legal and institutional frame, closer to the European one.”(23)*

**Key words:** agriculture, impact, agricultural policies, subsidies, acreage, livestock, farm structure, acreage structure, agricultural production, crop production, animal production.

### INTRODUCTION

During the preparation for adhesion, Romanian agriculture has been in a process of adapting production to market requirements and resizing acreage and livestock, with obvious consequences, reflected by the difficulties created on animal products market by increased imports and weak support to these sectors or steep decline in fruit and vegetables.

The agricultural policy measures involving market include: Single Area Payment Scheme (SAPS); national complementary payments per hectare and per capita (top-up mechanism that ensures supplement to support agriculture production orientation to strengthen local market requirements); forms of support for market-intervention measures; forms of support from the state budget for sensitive sectors and activities in relation to market requirements and structural adjustment in order to eliminate disparities towards the EU.

### MATERIAL AND METHOD

The overall impact of adhesion on Romanian agriculture is reflected in macroeconomic and sectoral indicators registered during 2007 - 2011.

In this context, the impact assessment is carried out prior to taking into account the effects of adhesion on agriculture and indirectly the changes generated by these effects on economy.

### RESULTS AND DISSCUSIONS

In 2010, according to the General Agricultural Census (GAC), farms in the North-West represented 13.7% of the national agricultural holdings and covered 13.6% of the utilized agricultural area.

They have experienced a more pronounced decrease in 2005-2007 (10.7%) than in 2007-2010 (only 1%).

Much higher growth of agricultural units, with 101.1%, demonstrates, on the background of reducing individual holdings by 1.5%, that the agricultural policy measures during post-adhesion period failed restructuring this sector, individual farms representing around 90% of the total in 2010. Structurally, most farms have less than 2 ha utilized agricultural area (63.5% in 2010), followed by 2 to 4.9 ha farms accounting for 25.1%. Number of those under 2 ha increased post-adhesion period by 16.3% (Table No. 1).

Increasing the post-adhesion period was also the number of farms, with over 20 ha. Highest dynamics, 76.3%, have had those over 100 ha, followed by those with 50 to 99.9 ha (an increase of 70.5%). These structural changes identified on the same trend since 2007, at least in farms over 30 ha, show a clear impact on the area of direct payments that led, albeit at a fairly low rate, to the formation of scale farms high of over 30 hectares. But if we look from a dynamic perspective, we can notice that the increase was not accompanied by small farms decrease, but decreases around 40% of farms with 5-20 ha.

*Table 1*

Dynamics and structure of the number of farms in the North-West, by class of utilized agricultural area during 2005-2010 period

	MU	2005	2007	2010	2007/2005	2010/2007
Under 2 ha	number	350,280	288,570	335,740	82.4 %	116.3 %
Share in total farms	%	59.2	54.1	63.5	-5.2 pp	9.5 pp
2-4.9 ha	number	162,460	160,080	132,780	98.5 %	82.9 %
Share in total farms	%	27.5	30.0	25.1	2.5 pp	-4.9 pp
5-9.9 ha	number	52,260	62,600	38,810	119.8 %	62.0 %
Share in total farms	%	8.8	11.7	7.3	2.9 pp	-4.4 pp
10-19.9 ha	number	13,330	13,820	7,940	103.7 %	57.5 %
Share in total farms	%	2.3	2.6	1.5	0.3 pp	-1.1 pp
20-29.9 ha	number	1,740	1410	1,500	81.0 %	106.4 %
Share in total farms	%	0.3	0.3	0.3	-0.03 pp	0.02 pp
30-49.9ha	number	820	990	1,190	120.7 %	120.2 %
Share in total farms	%	0.1	0.2	0.2	0.05 pp	0.04 pp
50-99.9 ha	number	550	610	1,040	110.9 %	170.5 %
Share in total farms	%	0.1	0.1	0.2	0.02 pp	0.1 pp
Over 100 ha	number	900	930	1640	103.3 %	176.3 %
Share in total farms	%	0.2	0.2	0.3	0.02 pp	0.1 pp

Source: based on Eurostat data, Structure of agricultural holdings 2010 and historical data (2000-2007) [27] and INS-RGA [30]

The impact of direct payment subsidies mentioned above is even more evident if we follow the evolution of the utilized agricultural area. Thus, in 2007-2010, there is a decrease in utilized agricultural area of individual holdings (29.8%) and an increase of those cultivated by agricultural units (30.9%) (Table No. 2).

*Table . 2*

Dynamics and structure of the utilized agricultural area of farms in the North-West region,  
by class of utilized agricultural area during 2005-2010 period

	MU	2005	2007	2010	2007/2005	2010/2007
<b>Total utilized agricultural area (UAA)</b>	<b>ha</b>	<b>1,941,420</b>	<b>1,962,060</b>	<b>1,808,350</b>	101.1 %	92.2 %
<b>Utilized agricultural area – individual farms</b>	<b>ha</b>	<b>1,433,210</b>	<b>1,683,900</b>	<b>1,182,540</b>	117.5 %	70.2 %
Utilized agricultural area – individual farms	ha	508,210	478,160	625,810	94.1 %	130.9 %
Under 2 ha	ha	268,860	227,700	237,230	84.7 %	104.2 %
Share in total UAA	%	13.8	11.6	13.1	-2.2 pp	1.5 pp
2-4.9 ha	ha	513,280	513,740	416,640	100.1 %	81.1 %
Share in total UAA	%	26.4	26.2	23.0	-0.3 pp	-3.1 pp
5-9.9 ha	ha	348,620	423,690	258,270	121.5 %	61.0 %
Share in total UAA	%	18.0	21.6	14.3	3.6 pp	-7.3 pp
10-19.9 ha	ha	170,210	179,570	103,360	105.5 %	57.6 %
Share in total UAA	%	8.8	9.2	5.7	0.4 pp	-3.4 pp
20-29.9 ha	ha	42,250	33,680	36,140	79.7 %	107.3 %
Share in total UAA	%	2.2	1.7	2.0	-0.5 pp	0.3 pp
30-49.9ha	ha	31,370	37,810	45,790	120.5 %	121.1 %
Share in total UAA	%	1.6	1.9	2.5	0.3 pp	0.6 pp
50-99.9 ha	ha	37,110	41,680	71,870	112.3 %	172.4 %
Share in total UAA	%	1.9	2.1	4.0	0.2 pp	1.9 pp
Over 100 ha	ha	529,710	504,170	639,060	95.2 %	126.8 %
Share in total UAA	%	27.3	25.7	35.3	-1.6 pp	9.6 pp

Source: based on data Eurostat, Structure of agricultural holdings 2010 and historical data (2000-2007) [27] and INS-RGA [30]

Utilized agricultural area of farms over 30 ha shows a positive trend since 2005, but also during 2007-2010. The greatest dynamic registered, however, on farms with 50 to 99.9 ha, the following values: used agricultural surfaces increased by 12.3% between 2005-2007 and 2007-2010 to 72.4%. However, the overall share of UAA remains at low levels, over 50% of the total UAA in 2010 was concentrated in farms under 9.9 ha. In farms with over 100 hectares of UAA growth was lower, only 26.8% in the period 2007-2010; however, they held 35.3% of the total utilized agricultural area in 2010, compared to only 27.3% in 2005.

Regarding the animal farms, the North-West region gathers around 14% of the country's livestock, expressed in livestock units (LU). Livestock (expressed LU) within individual farms have been declining, reaching from a share of 95.3% in 2005 to one of 89.0% in 2010.

Most livestock holdings are found in farms smaller than 2 ha farms and farms between 2 to 4.9 ha (62.7% in 2010), a 5.1% bigger share than in 2005, mainly due to weaker share numbers of farms from 5 to 9.9 ha (Table No. 3). Although having a lower total share, livestock in holdings over 20 ha have risen significantly, especially during 2007-2010 period (about 35-65%). We can say that the situation during 2007-2010 is a direct consequence of the CAP subsidy system and its application in our country. Thus, in the beef sector, subsidies are granted today considering registered

livestock in 2008, which proved disincentives for their growth, especially given the decoupling production subsidies. In the sheep and goats sector, the way of granting, in accordance to production levels, proved to be stimulating, the workforce number increasing by 14.6% in sheep and 26.0% in goats. Changed legislation in 2012 is expected to slow this growth (new conditions of eligibility were imposed). Level of subsidization of pigs and poultry sector has proven to be very stimulating, the swine number increasing by 18.2% and flocks number increasing by 48.4%. It can also be noticed that the positive dynamics of flocks of sheep, goats, pigs and poultry occurred due to reduction in the number of farms that grow these types of animals, which show an increase in their actual size and thus performance.

*Table 3*

Dynamics and structure of livestock (expressed in LU) in the North-West region, by class of utilized agricultural area during 2005-2010 period

	MU	2005	2007	2010	2005 %	2007 %	2010 %	2010/2005 %
<b>Utilized agricultural area - total</b>	<b>number</b>	<b>591.510</b>	<b>533.770</b>	<b>528.460</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>89.3</b>
Specialized-cereals, oilseeds and protein plants	number	48.070	37.410	35.110	8.1	7.0	6.6	73.0
Other field crops	number	71.010	154.380	138.520	12.0	28.9	26.2	195.1
Specialized - Horticulture	number	5.220	1.330	2.410	0.9	0.2	0.5	46.2
Specialized Viticulture	number	3.710	2.680	4.600	0.6	0.5	0.9	124.0
Specialized - fruits	number	12.660	9.530	14.470	2.1	1.8	2.7	114.3
Specialized – mixed permanent cultures	number	850	1.190	1.500	0.1	0.2	0.3	176.5
Specialized – dairy cattle	number	20.180	23.880	22.230	3.4	4.5	4.2	110.2
Specialized – cattle for fattening	number	13.390	5.260	9.980	2.3	1.0	1.9	74.5
Specialized – cattle (mixed – dairy)	number	1.370	8.210	6.450	0.2	1.5	1.2	470.8
Specialized – goats, sheep and other herbivores	number	38.970	23.760	27.910	6.6	4.5	5.3	71.6
Specialized – granivores (pigs, poultry)	number	35.700	47.920	88.950	6.0	9.0	16.8	249.2
Mixed - vegetal	number	93.900	16.780	14.580	15.9	3.1	2.8	15.5
Mixed – animal – mostly herbivores	number	85.850	51.010	55.760	14.5	9.6	10.6	65.0
Mixed – animal – mostly granivores	number	59.040	2.770	10.850	10.0	0.5	2.1	18.4
Combined – big crop and animals	number	40.110	45.150	4.850	6.8	8.5	0.9	12.1
Combined – various crops, vegetal and livestock	number	69.220	91.900	76.570	11.7	17.2	14.5	110.6

Source: based on data Eurostat, Structure of agricultural holdings 2010 and historical data (2000-2007) [27] and INS-RGA [30]

Another important aspect of agricultural development is the degree of specialization of farms.

In 2010, 26.2% of farms were specialized in field crops, 16.8% were specialized in raising granivores (pigs and poultry), 4.5% were farms specialized in growing various vegetal crops and various animals (mixed) and 10.6% were mixed livestock farms (mostly herbivores). All these farms had a share of 68.1% in 2010 in the structure of holdings, compared to 44.3% in 2005.

Utilized agricultural area was owned by farms specialized in field crops (34.8%), mixed livestock farms (10.4%, mostly herbivores) and in the proportion of 9.7% of farms specialized in the cultivation of various crops and growth of various animals (mixed). Moreover, compared to 2005, their share in total area used almost doubled.

On the other hand, livestock (expressed in LU) focused in 2010 at a rate of 26.1% in the holdings specialized in raising sheep and goats, 22.7% in mixed livestock farms (mostly herbivores) and 15.5% in livestock farms specialized in granivores (pigs and poultry).

If we look at the evolution in dynamics during 2005-2010, a period of specialized farms in the North-West region, by type of specialization, we can notice the following (Table 4):

- ✓ increased number of farms specialized in viticulture, fruit, various crops and animals, cattle and granivores (pigs and poultry);
- ✓ increased agricultural area used farms specialized in viticulture, various crops and livestock, field crops, cattle, dairy cows, cattle for fattening and granivores (pigs and poultry);
- ✓ livestock farms decreased in farms specialized in vegetal crops, which shows an increase in the degree of specialization;
- ✓ livestock have increased, especially in cattle farms (mixed) and in those specialized in raising cattle for fattening, the growth of their UAA proving a clear tendency to secure the feeding from its own resources.

Table 4

The dynamics of specialized farms, of their agricultural area used and LSU held during 2005-2010 period

	MU	2005	2007	2010	2005 %	2007 %	2010 %	2010/2005 %
<b>Utilized agricultural area - total</b>	<b>ha</b>	<b>1.941.420</b>	<b>1.962.060</b>	<b>1.808.350</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>93.1</b>
Specialized-cereals, oilseeds and protein plants	ha	216.610	218.370	233.860	11.2	11.1	12.9	108.0
Other field crops	ha	129.370	694.510	629.740	6.7	35.4	34.8	486.8
Specialized - Horticulture	ha	14.050	3.280	5.610	0.7	0.2	0.3	39.9
Specialized Viticulture	ha	1.890	2.620	4.460	0.1	0.1	0.2	236.0
Specialized - fruits	ha	48.310	30.360	30.840	2.5	1.5	1.7	63.8
Specialized – mixed permanent cultures	ha	2.790	2.760	3.290	0.1	0.1	0.2	117.9
Specialized – dairy cattle	ha	57.450	99.300	95.560	3.0	5.1	5.3	166.3
Specialized – cattle for fattening	ha	360	8.210	6.450	0.0	0.4	0.4	1791.7
Specialized – cattle (mixed – dairy)	ha	5.520	43.800	37.660	0.3	2.2	2.1	682.2
Specialized – goats, sheep and other herbivores	ha	491.200	156.200	165.700	25.3	8.0	9.2	33.7
Specialized – granivores (pigs, poultry)	ha	12.620	16.890	53.720	0.7	0.9	3.0	425.7
Mixed - vegetal	ha	254.680	53.400	43.460	13.1	2.7	2.4	17.1
Mixed – animal – mostly herbivores	ha	309.620	196.840	187.450	15.9	10.0	10.4	60.5
Mixed – animal – mostly granivores	ha	86.600	7.260	28.260	4.5	0.4	1.6	32.6
Combined – big crop and animals	ha	172.640	207.160	36.450	8.9	10.6	2.0	21.1
Combined – various crops, vegetal and livestock	ha	115.960	212.540	175.830	6.0	10.8	9.7	151.6

Source: based on Eurostat data, Structure of agricultural holdings 2010 and historical data (2000-2007) [27] and INS-RGA [30]

## CONCLUSIONS

The North West region experienced during the post-adhesion period (2007-2011) an economic growth from pre-adhesion period, with a slight decrease in 2009 due to the national and international economic crisis. In 2011, regional GDP, expressed in nominal terms, compared to 2006, increased by 64.5%.

Farms in the North-West region represented in 2010, according to the General Agricultural Census (GAC), 13.7% of the national farms and covered 13.6% of the utilized agricultural area. These farms have

experienced a more pronounced decrease during 2005-2007 (10.7%) than during 2007-2010 (only 1%).

## REFERENCES

1. Aprodu, I.C. (2006) *Decalaje agricole și dezvoltare economică regională în România*, Teză ASE.
2. Armstrong M., Taylor J., 2000, *Regional Economics and Policy - third edition*, Blackwell Publishers, USA.
3. Asheim B. T., Dunford M., 1997, *Regional Futures. Editorial*, Regional Studies 31 (5), 445-455.
4. Barro R., Xavier S., 1992, *Convergence*, Journal of Political Economy 100(2): 223-251, doi:10.1086/261816.
5. Bărsan M. (1999), *Integrarea economică europeană - Uniunea Europeană - relațiile economice cu alte zone*, Editura Fundației CDIMM.
6. Dăianu D. (coordonator), 2001, *Căștigători și perdanți în procesul de integrare europeană. O privire asupra României*, Centrul Român de Politici Economice, online at <http://www.cerpe.ro/pub/study27ro.htm>.
7. Diaconescu, M. (2002), *Economie europeană - coordonate ale construcției europene*, Editura Uranus, București .
8. Diaconu, N. (2001), *Sistemul instituțional al Uniunii Europene*, Editura Lumina Lex, București.
9. Dobrescu E., 2001, *România la începutul mileniului al treilea*, Pitesti: Editura Lica.
10. Dona I., 2000, *Politici Agricole*, Editura SEMNE, București, ISBN 973-40-0743-2.
11. Dona I., 2000, *Economie rurală*, Editura Economica, București, ISBN 973-590-102-1.
12. Dumitrescu S., Niță I., Ciochină I., 2002, *Uniunea Europeană*, Editura Independența Economică, Pitești,.
13. Frandsen S., Gersfelt B., Jensen H., 2002, *Decoupling Support în Agriculture – Impacts of Redesigning European Agricultural Support*, the Fifth Annual Conference on Global Economic Analysis, June 5-7, 2002, Taipei, Taiwan.
14. Otiman, P.I. (1997) *Dezvoltarea rurală în România*, Editura Agroprint, Timișoara, p. 275.
15. Pascariu G.C., 1999, *Uniunea Europeană – Politici și piețe agricole*, Editura Economică, București.
16. Pelkmans, J., 2003, *Integrare europeană - metode și analiză economică*, Editura Institutul European din România.
17. Savu, D.V., 1996, *Integrare europeană: dimensiuni și perspective*, Editura Oscar Print, București.
18. Shoven J., Whalley J., 1984, *Applied general equilibrium models of taxation and internațional trade: an introduction and survey*, Journal of Economic Literature, vol.22. (3): 1007-1051.
19. Stanciu, V.C. (2004) *Dezvoltarea rurală durabilă*, Teza de doctorat, ASE, București, p. 99.
20. Stanef, M.R. (2009) *Agricultura României în fața exigențelor Uniunii Europene*, Teză ASE.
21. Terres J.M., Britz W., Capitani C., Dwyer J., Gardner S., Hart K., Keenleyside C., Paracchini M.L., 2010, *Common Agricultural Policy Regionalised Impact - The Rural Development Dimension*, FP7 Project No. 226195 available online at <http://www.ilr.uni-bonn.de/agpo/rsrch/capri-rd/docs/d5.1.pdf>.

22. Toma E. (coordinator), 2010, *Sisteme de indicatori de evaluare a impactului aderării asupra producătorilor și consumatorilor*, Editura Ars Academica, București, ISBN: 978-606-8017-56-3.
23. Toma E., Alexandri C., Dachin A. (coord), 2009. *Agricultura României în procesul de integrare europeană, vol I*, Editura Cartea Universitară, București.
24. Zahiu L., Dachin A., 2001, *Politici agroalimentare comparate*, Ed. Economică
25. Zahiu L., Toma E., Dachin A., Alexandri C., 2011, *Agricultura în economia României - între așteptări și realități* - Editura Ceres, București.
26. Zahiu L., Toncea V., Lăpușan A., Toderoiu F., Dumitru M., 2003, *Structurile agrare și viitorul politicilor agricole*, Ed. Economică.
27. \*\*\*Eurostat, available online at:  
<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>
28. \*\*\*HG nr. 497/2004 privind stabilirea cadrului instituțional pentru coordonarea, implementarea și gestionarea instrumentelor structurale (MO nr. 346/20.04.2004) care a modificat HG 1555/2002.
29. \*\*\* Institutul Național de Statistică, baza de date Tempo online, accesibilă la [www.insse.ro](http://www.insse.ro).
30. \*\*\* Institutul Național de Statistică, Recensămintele Generale Agricole 2005-2010.