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President's Allocution

*We have the special pleasure to let you know that the Review of our University, „**Bulletin of Scientific Information**", having ten years of consecutive issue, it achieved the recognition of the **National Council for Scientific Research in Higher Education (NURC)**, being comprised in the category „**National Reviews – C Category**".*

*So, the Bioterra University review „**Bulletin Of Scientific Information**" works as a real platform for the information and exhibition of the most recent and valuable research in the agricultual field and connected sciences (food industry, agro-tourism, ecology, agricultural economics etc.).*

This way I express my gratitude the contributors to our review, authoritative academic and univeritary names of whose studies are found in the selection done by the scientific board of the review, co-workers with whom we have strong relations of partnership and mutual support in the development and course of some conjointed research projects.

I wish to the review many and consistent issues.

Prof. Floarea Nicolae, PhD
President of Senat Bioterra University Bucharest

Editorial Board's Allocution

„Bulletin of Scientific Information" magazine was published at the initiative of several young researchers with the direct support of Bioterra University Board, having the first edition in 1998.

Years passed and this magazine has enriched continuously its scientific and didactic dowry, becoming slowly but surely a veritable platform for academic information.

In 2008 the magazine changed itself into a new more dynamic and attractive format, being published in special graphic conditions (full-color) and fully in English language. Also, since 2014 the magazine benefits of a modern website: www.bsi.bioterra.ro.

Every year the editorial team has increased the number of members; nowadays it brings together numerous personalities of the scientific and academic world from different foreign countries, thus being a guarantor of a high scientific level.

Thanks to all our readers and collaborators that through their suggestions, criticisms and feedback contribute to the improving of our magazine quality.

Prof. ATUDOSIEI Nicole Livia, PhD
Vice Rector of International Relations

Prof. GALAN Catalin, PhD
Vice Rector of the Educational Activity

Summary:

BULLETIN OF SCIENTIFIC INFORMATION

ASPECTS CONCERNING THE ECONOMIC EFFICIENCY CORRELATED WITH THE STRUCTURE OF THE MACHINERY PARK, IN AN AGRICULTURAL UNIT CROP FROM ROMANIA

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Abstract: *: In order to increase economic efficiency in agriculture is necessary for each farm profitable endeavor for all products and organizational structures, but also to increase at a more intensively rhythm to achieve the competitiveness required by the competitive market. Agricultural unit should consider choosing an optimal structure of crops to ensure high benefits but also allow for appropriate crop rotation. It also required the purchase of equipment for executing works best period in terms of agro and fall in production technology performance. It was made an analysis of the profit obtained by the unit after production use and a determination of the necessary equipment for surface under study.*

In determining the need for tractors and agricultural machinery in a specific farm taken into account it is a must to provide the whole range of agricultural works in terms of quality, demanded by technologies. Account has been taken of the whole complex of interrelated elements that are specific to the studied farm. In their totality, they can be grouped into two major categories: factors that influence the structure of the tractors and agricultural machinery, namely the range of aggregate used in the specific conditions of work, the advantages acquired by the different ways of financing, technical elements, technological and organizational measures influence the required number of units of a certain type. They have been highlighted the working conditions and determined index of aggregate agricultural work: number of units, actual optimal load on the machine on which was set the deficit of machinery of the production unit under study.

The fat in this matrix represents a physico-chemical parameter regulated by law, the determination of fatty substances is Soxhlet method, which is considered to be the most accurate, which is the reference method [1;7].

Key words: *sibiu salami, fats substances, legislation*

Introduction

For Romania, agriculture is an absolute priority, the affirmation based on both natural and human resources of Romanian agriculture, as well as on social and economic functions of this vital branches to ensure food population, fewer raw materials for industry, an active and profitable export of food products, the protection of the environment and the landscape, maintaining the ecological balance, countryside development [1].

Nationally, agriculture is one of important branches of the Romanian economy. The contribution from agriculture, forestry,

fisheries in the Gross Domestic Product stands around 6% of GDP, and in the Member States of the EU is located at approximately 1.7% [10] [4][6]. Provisional data from the census, from 23.8 million hectares as sums Romania, agricultural area utilised in agricultural farm is about 13.3 million hectares, of which 8.3 million ha are arable land (62.4 %) [11].

Considering the objective process of concentration and specialization of agricultural production in the current stage of development and economic benefits of this process, it requires more and more the need of accurately sizing rational farm production in order to determine the degree of mechanization, ensuring greater economic efficiency. Optimization of tractors and agricultural machinery in accordance with current farm size is a contributory factor in improving agricultural activity [8]. Tractors and agricultural machines (machine systems) ensure rapid growth of labor productivity, agricultural works in optimal agronomic terms, which has the effect of increasing the quantity and quality of production, achieving higher agricultural production costs as low as possible [9]. Optimizing Agricultural aggregates aims to reduce material costs, fuel and energy consumption and must be done according to scientific criteria, both by displacement correlation methods with constructive parameters of agricultural tractors and machinery, and adapting mechanization technologies [2].

Materials and methods

Data were retrieved and processed in the balance sheet of the company and its annexes, for a period of three years. Economic and financial analysis represents the most substantial analysis tool with strong impact on future decisions of managers. We determined the income, expenditure and gross profit for each crop and the total crop.

To establish the optimal agricultural needs, the following determinations were made: > number of aggregates needed to carry out work processes operated: N aggregates = 1.1 S/ns z Wh Ts [3][5][7], where S = surface to be worked, ha; ns = number of shifts per day; z = the number of days to be carried out agricultural work; Wh = hourly working capacity ha/h; Ts = the time of a work shift, h; > area served is maximum surface from a peak of campaign, to be worked by the machine during the optimal period in agro technical terms; > optimum load - productivity achieved by each machine: L optimum = Wh x Ts x ns x z, (ha/machinery); > real load - surface to be worked in a top campaign partly due to each machine: L real = S / Nm, (ha/machines), where: S = the area served by the equipment in a campaign peak, Nm = actual number of machines used for the same work.

Results and discussions

Agricultural Society SC Morar Pan Com. SRL, established in 1995, is located in the northern part of the village Perişoru, Calarasi County. Perişoru village is in a plain area, which is favorable for agriculture. On the territory of the commune, agriculture has the best natural conditions to develop.

The structure culture from the unit is typical plains area, society cultivating field crops only. The decision on the structure of production involved the consideration of a series of elements, such as market requirements to a product or another, natural conditions, availability of labor, capital fixed and available on the holding, and so on.

However, the production structure has taken

Table 1 - Initial structure of production

Crt. No.	Crop	Area	
		Ha	%
1.	Wheat	250	25
2.	Wheat seed	80	8
3.	Maize seed	50	5
4.	Maize consumption	100	10
5.	Sun-flower	120	12
6.	Peas	50	5
7.	Malting barley	150	15
8.	Rape	200	20
	TOTAL	1000	100

Table 2 - Total production obtained

Years / Crop	2009	2010	2011
Wheat (kg)	586332	655965	688764
Wheat seed (kg)	271732	298906	313851
Sun-flower (kg)	156879	172567	181195
Peas (kg)	80383	88421	92842
Malting barley (kg)	465000	511500	537075
Rape (kg)	512000	563200	591360
Maize consumption (kg)	325000	348000	372000
Maize seed (kg)	99300	136980	110115

Table 3 - Averages productions obtained at the principal crops

Crop	Average production (kg/ha)		
	2009	2010	2011
Wheat	2350	2623	2892
Wheat seed	3397	3736	3923
Maize	3250	3480	3720
Maize seed	1986	2283	2447
Sun-flower	1307	1438	1509
Rape	2560	2725	2730
Malting barley	3100	2286	2819

into account a number of principles: how it contributes to the use of resources of various kinds, contribution to combating risk and uncertainty, accelerate the speed of rotation of working capital and others.

To optimize the production structure were necessary input elements such as total area owned, total resources available, the available workforce.

In 2009, the crops structure presented were obtained revenues of 2156146 ron were recorded expenses of 1304860 ron, gross profit being 851286 ron. The average yields of main crops were 2350 kg/ha for wheat,

Table 4 - Income and expenses in 2009

Crops	Total income per ha (ron/ha)	Area (ha)	Expenses per ha (ron/ha)
Wheat consumption	954	250	900
Wheat seed	4077	80	1300
Maize	1430	100	1200
Maize seed	8738	50	2850
Sun-flower	1242	120	1210
Malting barley	2077	150	1050
Rape	2304	200	1250

Table 5 - Profitability in 2009 (gross profit)

Crt. No.	Crops	Income ron	Expenses ron	Profit ron
1.	Wheat	264375	225000	39375
2.	Wheat seed	326160	222160	104000
3.	Sun-flower	149035	145200	3835
4.	Peas	64306	42500	21806
5.	Malting barley	311550	157500	154050
6.	Rape	460800	250000	210800
7.	Maize	143000	120000	23000
8.	Maize seed	436920	142500	294420
	Total Profit 2009			851286

Table 6 - Income and expenses in 2010

Crops	Total income (ron/ha)	Area (ha)	Expenses (ron/ha)
Wheat consumption	1049	200	1000
Wheat seed	4483	100	1400
Maize	1531	150	1350
Maize seed	10045	60	3050
Sun-flower	1366	240	1300
Malting barley	1531	180	1150
Rape	2452	170	1350

the 3397 kg/ha for maize and 1307 kg/ha of sunflower.

In 2010, the crops structure presented were obtained revenues of 2510710 ron were recorded expenses of 1474000 ron, 1036710 being profit. The average yields of main crops were 2625 kg/ha for wheat, the 3736 kg/ha for maize and 1438 kg/ha of sunflower.

In 2011, the crops structure presented were obtained revenues of 2902890 ron were recorded expenses of 1623850, 1279040 being profit. The average yields of main crops were 2755 kg/ha for wheat, the 3923 kg/ha for maize and 1510 kg/ha of sunflower.

For wheat consumption and maize consumption, in the years 2009, 2010, 2011

Table 7 - Profitability in 2010 (gross profit)

Crt. No.	Crop	Income ron	Expenses ron	Profit ron
1.	Wheat	209800	200000	9800
2.	Wheat seed	448300	140000	308300
3.	Sun-flower	327840	312000	15840
4.	Malting barley	275580	207000	68580
5.	Rape	416840	229500	187340
6.	Maize	229650	202500	27150
7.	Maize seed	602700	183000	419700
Total Profit 2010				1036710

Table 8 - Income and expenses in 2011

Crops	Total income (ron/ha)	Area (ha)	Expenses (ron/ha)
Wheat consumption	1446	270	1250
Wheat seed	5100	100	1700
Maize	2418	120	1480
Maize seed	11012	45	3200
Sun-flower	1509	220	1350
Malting barley	2538	155	1250
Rape	2730	180	1500

Table 9 - Profitability in 2011 (gross profit)

Crt. No.	Cultura	Income ron	Expenses ron	Profit ron
1.	Wheat	390420	337500	52920
2.	Wheat seed	510000	204000	306000
3.	Sun-flower	331980	297000	34980
5.	Malting barley	393390	193750	199640
6.	Rape	491400	270000	221400
7.	Maize	290160	177600	112560
8.	Maize seed	495540	144000	351540
Total Profit 2011				1279040

has been used seed lots of its own, in this way it has greatly reduced the cost of production per unit of area. At the same time, in the case of seed lots established at the wheat crop for seed in the previous year, 2008, was acquired seed of a high biological category so that for the years 2009, 2010 and 2011 were reduced costs on setting up these crops destined for seed production. Regarding to wheat for seed production is observed a higher wheat consumption due to the fact that they have been applied larger quantities of chemical fertilizers (a plus of 30 %). Due to the relatively small prices of the products delivered, in particular for wheat consumption (approx. 0.45 Ron/kg) unit has not been able to use a larger quantity of fertilizers, these being in conjunction with natural conditions atypical of even-numbered years study, i.e. conditions by the prolonged drought.

Table 10 - Agricultural machines park of the agricultural unit S.C. Morar Pan Com S.R.L.

Type of agricultural machines	Number of machines (piece)	Characteristics
Reversible plough	2	No. of plough bodies □7 Width of the plough body □30 cm
Disc harrows	2	Working width □6.4 m
Controllers	1	Working width □6.0 m
Cultivators for the preparation of germination bed	1	Working width □3.0 m
Machines for herbiciding	1	Working width □24.0 m
Machine for fertilization MA-3.5	1	Average working width □12.0 m
Dense seed drill Accord	1	Working width □4.5 m
Hoeing machines Rau	2	No. of rows□8; Working width□ 5.6 m
Self-moving harvester	2	Average working width □6.0 m

Table 11 - Optimum structure of the tractors park and agricultural machines from S.C. Morar Pan Com S.R.L.

Machine	No. of machines	Area covered by machines in the peak of campaign	Real load on machine (ha/ machine)	Optimum load on machine (ha/ machine)	Lack of equipment or equipment in excess	Tractor (Number and type)
Tractors 65 CP 130 CP 225 CP	2 1 2	-	-	-	-	-
Straw harvesters	2	330	330	326	-	-
Ploughs 7 plough bodies	2	680	340	552	-	2x225
Disc harrows	2	680	340	658		2x225
Controllers 6 m 3 m	1 1	450 230	450 230	618 309	- -	1x225 1x130
Straw seeders of 4.5 m	1	500	500	302	-1	1x130
Hoeing seeder machines - 8 sections	2	500	250	376	-	2x65
Machines for protection 24 m	1	680	680	752	-	1x130
Machines for fertilization □12 m	1	680	680	400	-1	1x65

Table 12 - Tractors park

Type of tractor	Power (CP)	Number of tractors (piece)
John Deere Tractor 8400	225	2
John Deere Tractor	130	1
U 650 Tractor	65	2

Considering the crop maturation of unity, it is found that the maximum activity is recorded in the summer, which corresponds to the end of June to mid-August, during which mature in order crops of barley, wheat and rape with a gap between them for 10-15 days.

Given the fact that barley mature before winter wheat by about 10-15 days and matures winter rape wheat crop after 10-15 days that have overlapping harvesting these crops that together they share the significant in terms of area covered.

Table 13 - Harvesting machines for harvesting straw cereales

Crt. No.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	250
2	Working speed, v_l	km/h	8
3	Real coefficient for the use of working time, k_r	-	0.85
4	Number of harvesting machines with an width of 6 m	-	2
5	Average number of working shifts per day, n_s	-	1
6	Number of days in which the work must be executed for wheat	-	10
7	Necessary number of aggregates, $N_{aggr.}$	-	1
8	Optimum load per machine, $L_{opt.}$	ha	326
9	Real load per machine, L_{real}	ha	250

Table 14 - Ploughs

Crt. No.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	680
2	Working depth, a	cm	25
3	Working speed, v_l	km/h	6
4	Real coefficient for the use of working time, k_r	-	0.92
5	Number of ploughs with 7 plough bodies and width 2.1 m	-	5
6	Average number of working shifts per day , n_s	-	2
7	Number of days in which the work must be executed	-	30
8	Necessary number of aggregates, $N_{aggr.}$	-	2
9	Optimum load per machine, $L_{opt.}$	ha	552
10	Real load per machine, L_{real}	ha	340

Table 15 - Harrows and controllers

Crt. no.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	680
2	Working depth, a	cm	8-12
3	Working speed, v_l	km/h	10
4	Real coefficient for the use of working time, k_r	-	0.92
5	Number of disc harrows with width of 6.4 m	-	2
6	Number of conbtrollers with width of 6.0 m	-	1
7	Number of conbtrollers with width of 3.0 m	-	1
8	Average number of working shifts per day, n_s	-	2
9	Number of days in which the work must be executed	-	7
10	Necessary number of aggregates □disc harrows, $N_{aggr.}$	-	2
11	Necessary number of aggregates - controllers, $N_{aggr.}$	-	2
12	Optimum load per machine - harrow, $L_{opt.}$	ha	658
13	Optimum load per machine □controller 6 m, $L_{opt.}$	ha	618
14	Optimum load per machine □controller 3 m, $L_{opt.}$	ha	309
15	Real load per machine - harrow, L_{real}	ha	340
16	Real load per machine □controller 6 m, L_{real}	ha	450
17	Real load per machine □controller 3 m, L_{real}	ha	230
18	Lack of machines □disc harrows	-	-
19	Lack of machines □controllers	-	-

Table 16 - Straw seeders

Crt. no.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	500
2	Working depth, a	cm	6-7
3	Working speed, v_l	km/h	8
4	Real coefficient for the use of working time, k_r	-	0.75
5	Number of seeders with width of 4.5 m	-	1
6	Average number of working shifts per day, n_s	-	1
7	Number of days in which the work must be executed	-	14
8	Necessary number of aggregates, N_{agr}	-	2
9	Optimum load per machine with width 4.5 m, $L_{opt.}$	ha	302
10	Real load per machine with width of 4.5 m, L_{real}	ha	500
11	Lack of machines	-	1

Table 17 - Hoeing seeding machine

Crt. no.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	500
2	Working depth, a	cm	6-8
3	Working speed, v_l	km/h	8
4	Real coefficient for the use of working time, k_r	-	0.85
5	Number of seeders with width of 5.6 m	-	2
6	Average number of working shifts per day, n_s	-	1
7	Number of days in which the work must be executed	-	10
8	Necessary number of aggregates, $N_{aggr.}$	-	2
9	Optimum load per machine $L_{opt.}$	ha	376
10	Real load per machine L_{real}	ha	250

Table 18 - Machines for teh protection of agricultural cultures

Crt. no.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	680
2	Working speed, v_l	km/h	8
3	Real coefficient for the use of working time, k_r	-	0.7
4	Number of machines with width of 24 m	-	1
5	Average number of working shifts per day, n_s	-	1
6	Number of days in which the work must be executed	-	7
7	Necessary number of aggregates, $N_{aggr.}$	-	5
8	Optimum load per machine $L_{opt.}$	ha	752
9	Real load per machine L_{real}	ha	680

Table 19 - Machines for fertilization

Crt. no.	Appreciation indices	Measuring unit	Value
1	Area covered, S	ha	680
2	Working speed, v_l	km/h	7
3	Real coefficient for the use of working time, k_r	-	0.6
4	Number of machines with average width of 12 m	-	1
5	Average number of working shifts per day, n_s	-	1
6	Number of days in which the work must be executed	-	10
7	Necessary number of aggregates, $N_{aggr.}$	-	2
8	Optimum load per machine $L_{opt.}$	ha	400
9	Real load per machine L_{real}	ha	680
10	Lack of machines	-	1

Conclusions

The data analysis presented results the following conclusions:

1. Agriculture occupies an important place in the economy and politics of our country. It is a strategically important sector in the national economy, a key component of the strategy of economic, political and social development of the country, due to its contribution to the welfare and social balance.

2. Agricultural Society Pan SC Morar Com SRL is a manufacturing plant specific plain area, the company only cultivating field crops, about 1000 ha. Production structure considered involved consideration of factors relating to the market to a product or another natural conditions, availability of labor, capital fixed and available on the holding, and so on.

3. SC Morar Pan Com S.R.L. is at a medium level in terms of technology and the average production volume compared with the largest competitors in the market, but in the future it is considered an increase on both levels especially that of a modern production technologies. Harvests are modest values, between 2300-2900 kg/ha for wheat, 3400-4000 kg/ha for maize and 1300-1500 kg/ha sunflower, for the three years of study. It can be shown that the factors affecting the level of production have not been used to its full potential (lack of quality agricultural work performed mechanically, lack of irrigation water correlated with drought, low quantities of fertilizers, lack of technology to the work carried deep loosening 3 - 4 years, and so on), factors that could bring the given conditions, large production increases.

4. Regarding the provision of technical systems of the production unit, this is the minimum possible negative effects on productivity and competitiveness of manufacturing activity.

There are certain chapters in addition to deficit and there are machines that do not lend themselves to efficient agricultural technologies. In this respect it is recommended that in addition to the action of modern equipment procurement, for work in increasingly profitable, taking into account the strict observation of technological operations, request advice and solutions coming from specialists in agriculture.

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THE INFLUENCE OF TECHNOLOGICAL FACTORS ON COW MILK PRODUCTION IN ZOOTECHNIC ECOSYSTEMS FROM VRANCEA COUNTY IN ROMANIA

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Abstract: *The increasing of cattle number from livestock ecosystems is a major objective in achieving feeding security of the human population. By the same time, the sustainable development of livestock is tightly linked to the protection, conservation and development of human useful animal species biodiversity.*
In this study are presented the comparative results from specialty literature about cows breading, depending on the explotation technology and factors that influence milk production. By the same time, comparisons are made between the mode of cows maintenance at national and international level with existing conditions in Vrancea County in Romania, regarding the applicability of possible strategies of restructuration of explotation technologys for milk cattle, according to race, ecological zone, size of holdings and form of property.

Key words: *ecosystem, management, feeding security, holdings, biotechnology.*

Introduction

In current conception, cattle's breeding and explotation technologys represent's all managerial and technical measures developed and applied in order to achieve harmonization the economic optimum with biological one, aiming at obtaining maximum quality productions at a lower production cost.

Management iti s one of the important factors that contributing to the increased production and reduction of the physical human effort, in both intensive system and in other operating systems of exploatation and animal growth. Considering the fact that the process of cows cows explotation it is an operation based on knowledge of individual peculiarities and of animal populations, as well as the interrelationships that occur between genotype and environment,

for obtaining oh maxim production, appers the need to determine the demographic parameters, of structure and population dynamics, the knoledge of exploatation and production organization factor's.

Below is presented as a study case, the territorial situation for Vrancea County. To identify those elements, the research took place at the location of medium and small holdings of dairy cows from Vrancea zone ant it was based on: analyzing the evolution of livestock and production obtained, of the forage base, accommodation and degree of mechanization of technological processes, biological value and the degree of genetic improvement of the two basic races - Brown (fig.1) and Romanian Black Spotted (fig. 2) exploited in the area, size of holdings

Fig. 1 - Cow races Brown

Fig. 2 - Cow races Romanian Black Spotted

and cattle's number in holdings, load to 100 ha of agricultural land, work force and management of technological factors in production.

Changing the ownership structure of cattle species from 30-35% in 1989, at over 99% in 2009, passed into private ownership, moves the interest in increasing modernization and in to exploatation of this species at small individual household level.

In terms of large farms and holdings, the existence of a highly skilled workforce and of experts with extensive production experience, it is guarantee for successful migration from existing production facilities to more flexible, with complete technological flow and with economic efficiency secured.

Analyzing the modern concept of exploitation of dairy cows, we see that his guiding principle is to increase milk production quantitatively and qualitatively, in condition of economic efficiency, with respecting internal and external factors influence that characterizes this production.

Materials and methods

1. Study of agricultural holdings

As demonstrated by literature and achievements in the world, we can say that agricultural exploitation it is the base of food production now and in future. To resist in the domain of breading milk cows in holdings should take into account the criterion of efficiency, land surface for growing fodder, for grassland (fig.3) and the market for selling products.

The experience gain in agricultural exploitations from developed countries may be different from an aria to another, from country to country and even inside these ones, considering the form of agricultural organisation. Thus, we can see a large variety

of exploitations from the basic one of family exploitation to the capitalist enterprises and also various forms of associations and corporations (cooperative associations, companies, private or combined corporations etc.), or multinational food companies.

Fig. 3 - Aspect of grassland

In Western Europe, USA, Canada, we can see a massive growing of the dimensions of the exploitations partially because the farm with a surface till 10 hectares is not consider profitable in most of the west European countries, but the optimal size of a farm is not strictly dependent of its and surface or by the number of cattle. Here we take into consideration the factor intensity. From our information it is significant that inside E.U. were we have reached an over production, the cattle farm receive money only in the following conditions:

- Keeping production between established limits;
- Diminishing of the total quantity of milk;
- Diminishing the areas cultivated with cereals;
- Rural tourism.

2. Making Bio products

These conditions have creates a frame for the appearance of cooperative exploitations or associations, specialized in raising animals, were the imposed conditions have not stopped the organisations to grow the average productivity.

The ideology of the exploitations in Romania begins with agrarian law from 1864. The promoter of this law was ION IONESCU DE LA BRAD which organized the agriculture in:

- Small family farms of 5 hectares;
- Large farm farms of hundreds of hectares.

From these types a third from the small farm and a half from the large farms had to be cultivated with fodder. The reforms which followed tried to establish the social order in rural areas, but, not until now, even with the latest law no. 18 \ 1991, all we have

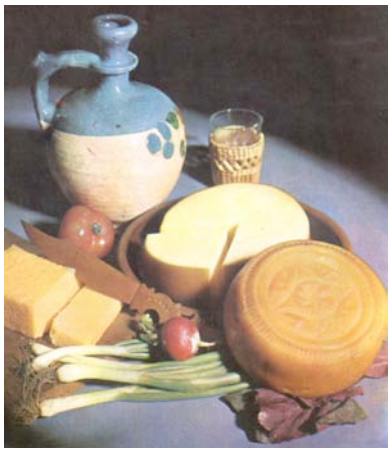

Fig. 4 - Aspect of the traditional products

managed to achieve is to pass the lands to those who are working it. Chronologically, the explorations have evolved as follows:

- Small and large farms;
- Credit cooperatives, lease and buying cooperatives (1919 – 1921), reducing the number of these explorations due to the “law of free circulation of agricultural properties” (1929);
- growing the peasant properties to minimum 50 hectares (V., MAGEARU – 1933);
- gathering of rural properties (BADARAU, M., A., 1920 – 1940);
- organising cooperative exploitations (VASILIU);
- obligatory exploatations of minimum 500

hectares (N., STEFANESCU – Iasi – 1931);
- associations for improving agriculture (Gh. IONESCU SISESTI – 1931);
- making associations as agricultural production cooperative (V. ROMESCU – 1923);
- economical organisations to coordinate the cooperatives (C. MOLDOVEANU – 1935);
- the most complex form of organisation was proposed by Marin CHIRITESCU ARVA, uniting the economical form of peasant properties into a cooperation (cooperation-farms).

The raising of animals during this time had the objective to to ensure theown needs of a house hold not to produce goods.

In this stage, after Law no. 18 \ 1991 was applied, when properties have been reduced to average 10 hectares of land and 1,3 cattle for each owner, brings us to a point where we cannot even call the farms but explorations, situation explained by the fact that an owner has land, raises cattle but also other species, birds and the agricultural products which exceed it consumption are pre-worked before selling using its own labour. The number of these explorations is very large for the moment being.

As for the actual situation from private owned explorations, if we want them to be profitable it is necessary to consider the evolution of Romanian agriculture in time, the achievements of developed countries and advices from scientist and specialists.

Given the necessity to present the latest theoretical knowledge and to link these existing knowledge of the practical conditions, we tried to group everything that is new and useful knowledge and understanding of the current level of development of dairy farms.

Due to the particularities of the relief (Fig. 5) and geographical position, climate, flora, fauna and soil structure of Vrancea County are varied and complex, which characterizes a different agricultural production in the three defined areas (lowland, hilly and mountainous).

In terms of agriculture, county size is given by the existence of 133 429 farms with an average area of 1,42 ha of agricultural land, ofwhich 35,202 are holdings, with an average of 1,54 cattle, a situation that confirms the nature of subsistence farm. These holdings are primarily providing labor and all sectors of activity in the area.

Regarding ownership, the proportion of farms owned 1-3 ha of agricultural land and between 0,5-1,0 ha, with anaverage of 1,54 cattle effectively against average, 1,44 bovine. Summarizing the most significant aspects of the investigation results in this paper, data have been presented since 1990, which were compared with the previous period this year, at the macroeconomic level and then through a case study.

Comparisons were made with some values in the country and we are part of the European area, issues that led to the conclusion that the evolution of cattle herd, even if not maintained on a continuous upward curve, there was private interests of the population this species and to increase production.

The positive effect of the transition to private ownership of livestock was characterized by:
- significantly improving the overall state of maintenance of animals;
- reducing the incidence of morbidity and mortality;
- improving the reproduction indices;
- significant improvement of average milk production and average weight at slaughter;
- improving the age structure by increasing the share of young animals and older animals to reduce weight, with low production.

At the same time, very small size, the actual number and size of land holdings has many more disadvantages, the most important being:

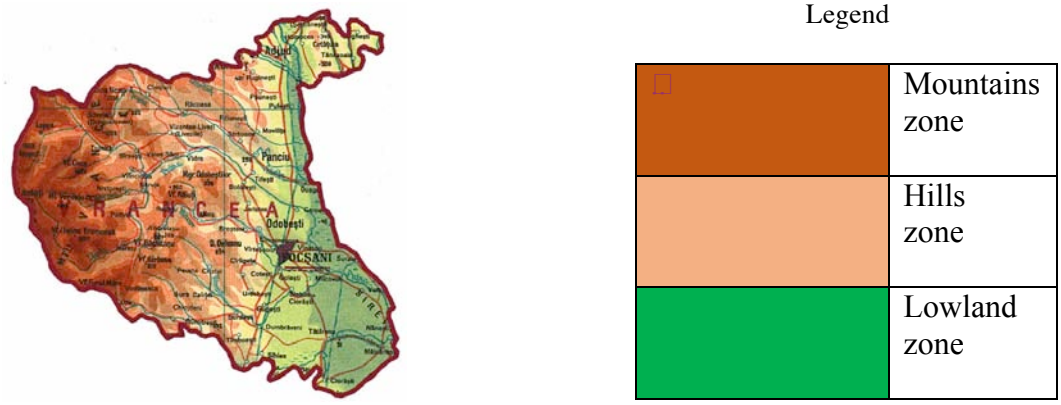

Fig. 5 - The particularities of the relief (Vrancea County)

- Limited application of technology flows, as well as the equipmentfor obtaining, processing, storage and recovery of production;
- lack of an appropriate framework for carrying aut an appropriate feeding with a balanced structure and volume of concentrated feed, allowing the expression of biological potential and obtain quality products and efficient;
- difficulties in applying biotechnology to breeding and selection in relation to artificial insemination, embryo transfer and control of breeding performance;
- difficulties in the application of sanitary;
- veterinary prevention, detection and combating disease to reduce morbidity and mortality;
- limiting the recovery of output produced by specialized processing units for them to reduce the herd;
- low level of professional knowledge of the farmer, growing andcare of animals, obtaining and processing in terms of productionand adaptation to market economy requirements.

3. The study of biological material

Knowledge production levels, plant development, reproduction indices and degree of genetic improvement from which we start, the management of technological factors and state economic policy in the field of cattle breeding is essential in promoting the modernization of growth and cattle operation.

Simplistic approach to modernization by increasing the number of cows in stables scale family farms and adapt to new requirements ofstable dimenssion the transition to market economy, would be an unfortunate remake of fundamental errors, prepared in haste, resulting in large and complex firm, many oversized, functional and economically inefficient.

It should be noted that modernization of farm livestock it triggers over time important changes in socio–professional plan.

In the three ecological zones of Vrancea County is growing two main breeds of cattle: Brown Maramures, which is basic breedfarm holding and Romanian Black Spotted breed found only inplain and hilly areas, both small and medium-sized family farms and in farms belonging to state-owned companies.

The analysis of production performance, successive lactations, theareas, towns and family farms, it appeared that Brown cattle population Vrancea area is characterized by an average of 3 032,42 kg in March and 3,71% milk fat content. The ecological zones arefound in the hilly area cattle population

has made the best productive performance, with an average of 3 106,21 kg milk fat and 3,70%, while the population has made the Brown Mountain area, only 2 796,72 kg of milk fat and 3,75%. Brown cattle in the lowlands have achieved an average production of 3 055,73 kg in March and 3,71% milk fat.

Existence in these populations, 3,24% of cows with average performance over 5 000 kg milk reflects the genetic potential of the Brown race and beneficial impacts of the use of genetic breeding value, and can improve the productivity level of the population studied.

Brown cattle population studied of the ecological zones and farm types show significant differences between family farms in the same area and between the plains, hilly and mountainous.

Analysis of age at first birth shows a slight precocity of the population studied, but also great variability within each farming areas and from one farm to another.

On the other reproductive indices studied (breast repose, calving interval, service period), it can be concluded that the function of reproduction was greatly influenced by technological factors operating and management practices in each farm.

Development and body conformation analysis shows that the population studied is characterized by an average of 125,19 cm height and weighing 473.29 kg, with differences from one area to another and from one farm to another in the same zone.

With a much lower share in the structure of Vrancea county race, Romanian Black Spotted is prevalent only in some family farms and state-owned companies in the area of plains and hills.

Average performance of milk production and fat are at level 3 131,22 milk kg and 3 468,39 kg milk fat, for BNR cattle in plains, respectively, 3 597,67 kg and 135,49 kg milk fat in the area hilly.

The analysis of indices of NBR breeding cattle population, the same issues emerged, and as established with the Brown race. The NBR cattle from Vrancea area is characterized by an average size of 129,10 cm and 505,73 kg of body weight, values below the breed standard.

4. Accommodation and providing forage base

The analysis of housing and interior design space of existing livestock farms in the Vrancea area, prior to 1990, can make the following comments: Maintenance cows make the system, “bound” in the stables with a capacity of 107,204 or 316 seats, with seating on two and four lines that, depending on the nature and intensity of farm operation were different and complex technological solutions.

These houses and farms in late 1989 were upgraded over 90%, ensuring:

- optimal microclimate conditions;
- confort stand on maintenance technology;
- maintenance and dispensation system linking group;
- water supply to the stand by automatic drinking troughs;
- mechanization of feeding solution volume with fodder;
- Solutions for manure disposal and management;
- Mechanized harvesting of feed solutions, storage, preparationand administration;
- maternity, disease control, nursery, artificial insemination, medical station - Veterinary;
- parkink for cars, machinery, vehicles and workshop;
- Administrative Group.

It is a fact that these shelters had some shortcomings:

- high consumption of materials;

- maintenance of housing and poor sanitation conditions in most farms;
- a low productivity and poor working conditions;
- a poor reliability;
- poor management and lack of modern data;
- poor management, with direct influence on performance, cost and profitability.

On the basis of feed and production averages prior to 1990, there is some swings from year to year and from one farm to another, the trend towards reduction of arable fodder crops.

The decrease in area, and average yields contributed to the inconsistent production of total milk in the existing biological potential. Analysis of these elements after 1990 leads us to the general conclusion that, in 2009, compared with 1989 (52,121 head), breed number decreased to 33 242 heads.

Results and discussions

1. Technologies and management from holdings

The study conducted in three areas of Vrancea County, it appears that the total holdings, 56% raise one cattle, 35.3% raise two cattle, 7.4% raise three cattle, 1.1% raise four cattle and only 0.2% raise five cattle or more.

The largest proportion, 61.1% of cattle farms, are farms owned from the hilly area, followed by those in the mountain area with 55.5% and 55% plains. It is pointed aut that the number of farms that grow only cattle is extremely low, most practicing polyculture in order to meet their own consumption.

The study of technological elements of family farms with dairy cows lead us togeneral praise that, currently, the peasant household still apply old technologies, traditional ones:

- applies to maintenance related holdings winter and summer mixed;
- housing generally allow operation housed livestock, but farmers are striving to improve comfort, especially for lighting, ventilation, manure disposal, taking food, water;
- feeding is done manually, the mechanization of the technological links are nonexistent;
- watering is done with specially designed buckets or troughs ordirectly in some wells near streams;
- solid manure removal is done manually, and those liquids throughchannels, straight out, where in rare cases is collected in tanks or platforms, often being left to pollute the environment;
- During the summer, during the day is organized communal grazing in herds on fields, in the evening, the cows are withdrawn in their own household;
- in the mountains, there are also situations where cows are taken to fields located at large distances, where they organized the so-called cows-place till autumn maintenance. There are no shelters improvised operation, accommodation at night and in case of bad weather;
- cattle grazing include all age groups and even non castrated steers and other species, in most cases being goats;
- the quality of pasture is totally inadequate, hydro-fertilizing, overseeding, weed control and toxic plants are totally forgotten;
- milking is done only manually, because the owner holding a small number of cows, the requirement to present material, can not allow the purchase of a mechanical milker.

Poor financial strength does not allow that farmers do invest for the modernization of housing, providing quantitative and qualitative forage base, provision of equipment, machinery, plant, that would work easier and to ensure the profitability required.

The farmer has great difficulty in realizing the production of milk and meats costs far exceeding production costs.

Case study, in 1263 farms and 2626 farm people, highlighted the following aspects of employment breakdown by age groups:
- 13,02% up to 20 years;
- 20,90% between 20-40 years;
- 40,60% between 40-60 years;
- 25,48% spots 60 years.
The sample studied, dealing directly livestock:
- 3,22% up to 20 years group, of which only 1,06% girls;
- 13,32% of group 20-40 years, of which 9,14% women;
- 31,79% of group 40-60 years, of which 21,13% women;
-11,04% in the group over 60 years, of which 4,68% women.
Compared to the above, it can be concluded that, of the 2626 people surveyed existing farms, 60,39% raised animals, 42,83% which exceeds the age of 40 years, and of these 34,95% are women.
Given the average number of residents who returned to the farm, compared to those working directly, the ratio is 1,39 persons, with variations from one locality to another, ranging from 0,44 persons in Panciu holdings and 2,16 people in Hânguleşti holdings.

Conclusions

The research showed that the breeding of cattle is a key concern to farmers Vrancea area. Concerning the development, production modernization and achieving effective freight dairy farms, we think it is absolutely necessary to upgrade technologies in cattle breeding and exploitation of dairy farms in the general context of action to recover and relaunch the Romanian livestock it is the main link to be taken into account regardless of ownership form and size of holdings.
In this context, it is in the essentials:
- construction and modernization, especially in the housing;
- completion of new water supply systems and water sources in own holdings;
- establishment of private centers specializing in local level (community), taking over for milk storage, primary processing (pasteurisation, cream) and, in perspective, processing and recovery in the form of milk products;
- establishment of fixed and mobile private centers at locallevel (common) or the joint centers for the preparation of concentrated feed, which is technically assisted nutrition experts to develop recipes and optimized rations for dairy cows and other species;
- improving the structure and fodder crop cultivation, showing a growing interest among farmers, even if establishment of this culture is very expensive;
- extending technologies for growing forage plants in own field and improving the natural pastures, harvesting, conservation and efficient use of feed obtained maximum of production, the mechanization having a leading role;
- Potential for soil fertility through land improvement (drainage,irrigation), with manure and chemical fertilization, pest and disease control;
- the natural meadows, the main concern is the need to increaset heir use, by creating technical and organizational conditions in order to increase the load of cattle, with quantitative and qualitative increase of green mass.
Technical and managerial actions will be taken, separately on ecological areas as follows:
- Natural grassland in plains, given the high fertility of the soil, will be exploited for fodder cultivation with high productivity;
- natural grasslands in hilly and mountainous area must be improved through;

- anti-erosion works;
- deforestation, drainage and irrigation;
- reseeding and overseeding varieties and hybrids of perennialgrasses and legumes, high productivity;
- manure and chemical fertilization.

For full and effective exploitation of pastures, it is necessary to ensure a rational grazing, dividing surfaces normal or electric fences, ensuring water provision, collection and preservation as hay, of the surplus of green mass.

Natural grassland areas, particularly pastures, will be operated asfollows:
- by individual owners of privatized;
- owners associations or organizations the congregation;
- the fields jointly organized by the City Hall, especially for family farms use animals, so the smaller size.

Own field of forage crops is considered as optimal (indicative) in Vrancea area as the following structure:
- 64% alfalfa and clover;
- 15% perennial grasses;
- corn silage and 11% in own field;
- 1% annual perennial green mass;
- 9% fodder beet and kale.

Also successive double crops can be a resource and be considered possibly as back-up.

For the full realization and effective implementation of feed volume given the physiological requirements of animals and the need to maximize their biological potential, it is necessary that:
- During the summer (grazing) cattle can be fed with green mass, primarily through grazing areas cultivated for green matter;
- During the winter (indoors) for the same species, feeding withhay is made (Fig. 6), special attention will be given to the whole plant silage made from corn as the basic feed and fodder roots. In achieving high yields of milk and meat.

Directions to improve breeding technologies for dairy cows in medium and small farms in Vrancea area must consider:
- Carrying aut feasibility studies in the area adapted to specific conditions;
- improving development and integrated foundation technology flows;
- adapting existing technologies to systems maintenance and animal feed production using appropriate technologies, food preparation and administration;
- ensuring complex mechanization and development of effective technological solutions;
- general reduction of energy consumption and use of unconventional sources;
- medium and long term, should be considered computerization of basic technological activities (concentrated feeding, milking, breeding, manure disposal, materials management and production).

The growth strategy of dairy cows, it seems necessary:

Fig.6 - The appearance of an adjustable fitting for hay storage

- increase in density to 100 ha of agricultural land, especially in hilly and mountainous areas;
- Average production increased to 4,500 kg

up in 2005 by making genetic progress 1-2% annually;
- improving the reproduction indices, increased birth to at least 85%, reducing the interval between births and reduce the age at first birth;
- Increasing the number of calves destined for fattening and exploit existing availabilities acquisition organization.
Improvements in production parameters in small and medium-sized farms of dairy cows can be achieved through the development of quantitative genetic research priority populations and conversion index increased by cows, taking into account all adjustment mechanisms and the use of technology efficient operation.
Genetic progress must be oriented to improve profitability by reducing production costs, specifically by increasing animal productivity.
From interviewing made, it results that those who raise dairy cows on the farm would introduce technical progress, but lack of money, lack of initiative, yet to achieve the production of goods and lack of support on loans beneficial (causing the farmer to milk all by hand) does not give even allowed to purchase a device for milking. In order to harmonize the economic optimum with biological one,operated by dairy cows is necessary to apply the modern technology.
Only a greater labor productivity of dairy farmers, coupled with experience in production, investment levels in high-tech equipment, which avoids hard work and time, will give them enough time for planning, purchasing, sales, etc. in a word to management.
Selection, in turn, determine, according to the management and functionality of the farm, the restructuring of the animal population, restructuring occurs, practically, by multiplying the differentiated phenotype of animals with the most favorable under the circumstances, occurring while the goal and the selection of use ful genotypes.
Concerning the development, production modernization and achieving effective freight in agricultural holdingscounty, it is imperative:
- equipped with adequate machinery;
- construction and modernization especially of animal shelters;
- supporting the optimization of the size of holdings;
- Continuing improvement of existing breeds in areas of the county;
- establishment of alfalfa, silage crop production and improve existing natural pastures and meadows;
- intensive use of manure;
- promotion of cattle breeding projects in peasant holdings funded by efficient loans;
- creation of professional organizations that promote and protect the interests of farmers.
To do different work in farms, the use of horses in the first place, and cows for milk to be used only for this production. In order to ensure appropriate animal comfort during feeding, milking, rest and hygiene, we recommend improving the constructive and functional aspect of the shelters. Maintaining the current form of dairy farm provides not only the internal needs of milk, but also the capitalization of surplus, which is a false idea of commodity production.
A feature of the development of small and medium livestock farms should be to focus, specialization and integration through associative forms of production.
Economic activity, nutrition and reproduction in dairy farms are compartments where computer finds a wide field of utility.
The activity of dairy farms to be understood, at present, not as an individual view of the small farmer, who use unreasonable means of production, fragments of land areas, livestock and products, but as a social

function, in which take into account three key factors: land, animals and humans. Most important technological developments to increase holdings of dairy cows can be grouped around three main factors, namely:
- increased productivity;
- reduce feed costs;
- emission control.

As a general conclusion of this case study, the territorial aspect, the ideal solution, in dairy farms is to increase the average production per female (practicing artificial insemination for further improvementof breeds), and it is delivered as the production of high quality goods, without ignoring that „the decisive factor of production to raise welfare in general is neither space nor energy nor cultivated land, but also improve the quality of the human population and increasing their level of knowledge" (SCHULTZ TW, Nobel Prize, 1979).

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USING BIOINFORMATICS AND REPRODUCTION INDICATORS FOR UNDERSTANDING THE RELATIONSHIPS THAT ENVIRONMENTAL INFLUENCE COWS' MILK PRODUCTION

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Abstract: *Livestock production (milk, meat) depends heavily on reproductive activity, leading to scientific research and practice to find ways to optimize growth and livestock operation in order to achieve maximum economic efficiency. Research work in cattle reproduction, especially in family farms, are particularly important because understanding leads to increase capacity while the number of existing animals, meat and milk production, combating infertility, increased birth rates, increasing revenue and improving people's work throughout the year.*

In the area of reproduction, these goals are of particular importance, both theoretical and practical, especially after the introduction and expansion of artificial insemination technique, a method that has transformed animal reproduction activity in a process managed and controlled entirely by man . It should be noted that the farm is the main basis of agricultural production, so it is necessary to highlight issues affecting the animal reproduction in the investigated area. Being holdings, taking into account recommendations made by the World Health Organization (WHO) and United Nations Food and Agriculture Organization (FAO) as well as those of romanian and foreign specialists in human nutrition.

In this regard, we calculated the main nonlinear regression of correlations analysis that exist between the LU and the most important factors that affecting increased production of milk cows in the South East and North East economic region of Romania.

Key words: *eco-bio-economics, sustainable development, indicators of reproduction, biodiversity, bioinformatics.*

Introduction

In the area of reproduction, the results obtained in this field are very different, depending on growing conditions and exploitation of animals provided for directing and monitoring the reproduction activity, preventive and curative measures of reproductive disorders, etc. Note that the leading units in raising cattle, obtained good results in reproduction these species lime. In these units is done in the first calving age 30 months, the potential reproductive capacity of close to 100%, fecundity over 80%, rest of under 3 months of pregnancy, the birth rate exceeding 85% efficiency using cows as breeding range the calving of 450 days, 60-75% conception rate, gestation index of 90%, the percentage of "reimbursing" 80%, stemming tulle breeding frequency of 50% mortality rate below 1.5%, etc.

It is estimated that in perspective, the herd of cattle could increase con creasing in line

with the experience gained, with biological and existing material and technical basis set. This requires the practice of enlarged reproductions, with an average annual growth rate double that worldwide. It provides improvement of all reproduction parameters (birth rate of 85%, less than 1.5% mortality rate based on the changeover to a flock of 85%, etc.).

Materials and methods

The working method used consisted of macroeconomic studies and sample-based study using different sources of information. Raw data for the study overall, we have received from holdings records and official control of livestock performance practice (COP) and biotechnology in cattle reproduction.

The primary data that formed the basis of this study were taken from national and international specialized literature and Academy Romanian - INCE - Research Center for Biodiversity Studies - Acad David Davidescu Department for Agriculture and Rural Development, National Agency for Animal Breeding and Reproduction, Statistical Yearbooks 1995 - 2009, Ministry of Agriculture and Rural Development.

Centralized data processing were calculated and analyzed by light, merge and correlate with the many observations made directly on farms and official statistical data, reporting final results to the requirements of the transition to market economy conditions and current and future opportunities peasant household.

To identify these elements, study was focused on livestock development and production, size and weight of cattle farms, 100 ha of agricultural land cargo management and technological factors of production.

In all cases, the research results were statistically processed and interpreted in accordance with established methodology of calculation, is given in paper form of tables and charts. For correlation and regression relationships were used in calculating the Pearson correlation index and plotting the regression equations, and based on the coefficient of determination (R2) to identify the percentage number of cases where the relationship is valid, it is passed in the respective graphs .

In terms of races, the major reproduction indices were studied breeds Brown Spotted Romanian, Romanian Black Spotted, Pinzgau Steppe Grey.

For the calculation we used computerized data used SPSS (Statistical Package for the Social Sciences), one of the most used in the statistical analysis

In terms of economic management, in the published literature and known relationships between value and growth indices of the main reproduction, which makes the quantity and regularity of livestock production.

In this regard, A.T. Bogdan, Dorina Bogdan et col. established a mathematical relationship that expresses the level of milk production in cows, according to the index birth and the different coefficients of reproduction biology and pathology

Given the influence that they have evidence of breeding on milk production in cattle, the legislature has developed an original formula, which, based on additional birth index, enables the establishment of additional milk production, as follows:

$PL(hl)=EMV \bullet IN(104 \bullet PM+PM1 \bullet IN1 \bullet K1) \bullet 10\text{-}6$

where:

PL = total additional production (hl);

EMV = average actual cows and heifers (head);

IN = additional average index birth to cows (%)

PM = average milk production per cow in milk (HL);

PM 1 = PM for heifers
IN 1 = IN in primiparous;
K 1 = heifers suitable for breeding of all calves born in the VPM (head).
Given that the profitability of cattle reproduction zooeconomics in our country is expressed by the term "year, cow and calf", improving birth index by veterinary and health activities supported by technical measures - economic and management, can achieve an increase in this the main reproduction index by about 15%.
Thus we can calculate a possible additional milk production on three successive levels of improvement in birth index staged in the country at least 5%, and for some areas of economic development of Romania by 10% and in some counties even 15%. Also, it may be a possible approach to increase production quality and quantity of milk and meat, respectively, based on overall improvements veterinary care (with special reference to prevention and control rational and reduce pregnancy loss infecundity postpartum), especially in the new market economy conditions. In this regard, the guide, the following factors illustrate the variable nature Sanitary - Veterinary:
• K_1 = coefficient of loss of calves during lactation (eg 3%);
• K_2 = coefficient of loss for youth during breeding (eg 4%);
• K_3 = coefficient of loss to the optimal age for breeding (eg 2%);
• K_4 = coefficient of losses by reproductive disorders (eg 4%);
• K_5= coefficient of pregnancy loss including abortion (eg 3%);
• f m = multiplication factor of 0.34 in value.
Note the potential coefficients K_1 to K_5 totaling about 16% and are called "health factors - veterinarians (K SV) of influencing the value and growth index birth.

Results and discussions

The research focused mainly on economic regions, North East and South East of Romania, in which we identified for each component county: LU, the total area under pasture and hay, total agricultural land and the number of cattle.
Knowing that milk production is directly dependent on the weight of milk cows in these two regions LU exitent economic development, we tried to establish links between their size and number of existing cattle and farmland, both cultivated and pasture and hay .
In the South East region correlations are different in each of the counties considered, between LU, the area planted with pastures and agricultural land, as seen in table and graph below.

Table 1
Results LU value obtained in the study in correlation with pasture and agricultural land in the South East region (orig.)

Counties	LU X	Pasture and hay Y	Agricultural land Z
Braila	229047	33999	386262
Buzau	251526	118227	401174
Constanta	160968	57845	521136
Galati	251915	41789	352356
Tulcea	144828	62097	352124
Vrancea	169807	73668	231526

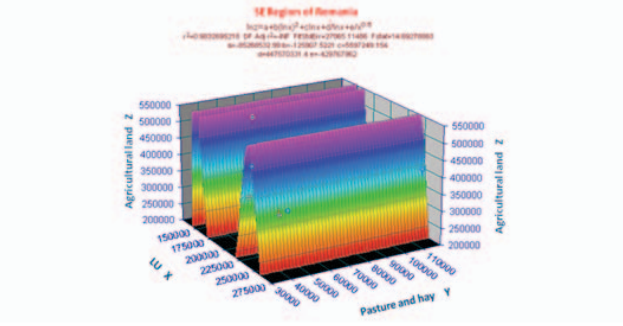

Fig. 1 Nonlinear correlation between LU, pasture and agricultural land in the South East region (orig.)

The same correlation is observed in the case of LU, the area planted with pasture and arable land, which shows a direct correlation between agricultural land and arable land in this region.

Linear correlation between the amount of LU, the number of cattle and agricultural land in the South East region, highlights the very high agricultural land accounts for a maximum allocation of LU, regardless of the number of cattle. This trend is also reflected in the correlation between LU, the number of cattle and arable land.

The NE region is noted that there are counties that have a small number of area under pasture at a large agricultural area and a large number of LU.

Table 2

Results LU value obtained in the study in correlation with the number of cattle and agricultural land in the South East region (orig.)

Counties	LU X	Number of cattle Y	Agricultural land Z
Braila	229047	111217	386262
Buzau	251526	128720	401174
Constanta	160968	131889	521136
Galati	251915	87366	352356
Tulcea	144828	60349	352124
Vrancea	169807	66937	231526

In the Northeast region, the correlation between UVM, the area planted with pasture and arable land, we see that a large agricultural area, we have a large number of area under pasture and a great value at LU to medium.

There is a clear difference between the number of cattle counties in North Eastern region, is below average or above in both cases increases with increasing grazing LU. Correlation is identical for the correlation between LU, the number of cattle, agricultural land and the correlation between LU, the number of cattle, the arable land.

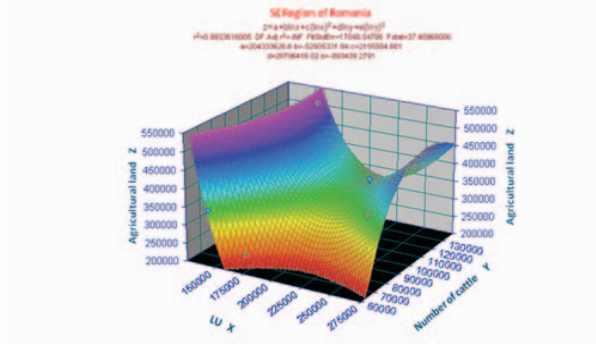

Fig. 2 Nonlinear correlation between LU, the number of cattle and agricultural land in the South East region (orig.)

Table 3

The results obtained in the study in correlation with LU value pasture and agricultural land in the North East (orig.)

Counties	LU X	Pasture and hay Y	Agricultural land Z
Bacau	247230	126204	325120
Botosani	284837	89336	389747
Iasi	378125	107821	380919
Neamt	236207	109428	282670
Suceava	368054	165354	344918
Vaslui	236578	97182	398783

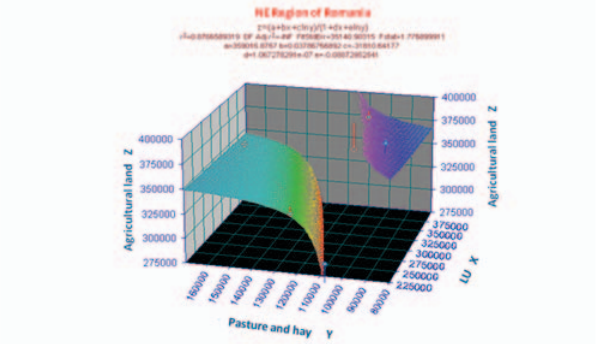

Fig. 3 Nonlinear correlation between LU, the pastures and agricultural land in the North East (orig.)

Table 4

Results LU value obtained in the study in correlation with the number of cattle and agricultural area in North Eastern Region (orig.)

Counties	LU X	Number of cattle Y	Agricultural land Z
Bacau	247230	109847	325120
Botosan	284837	138379	389747
Iasi	378125	102857	380919
Neamt	236207	141668	282670
Suceava	368054	147524	344918
Vaslui	236578	114219	398783

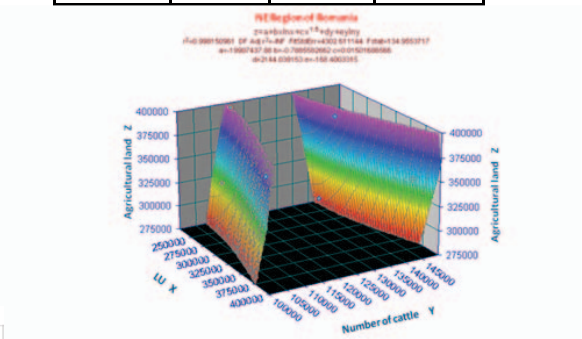

Fig. 4. Nonlinear correlation between LU, the number of cattle and agricultural area in North Eastern Region (orig.)

Conclusions

Achieve superior results on line breeding to improve the activity will be possible if it will still take me a series of measures, such as: improving the growth and exploitation of cattle, herd structure optimization; directing reproduction activity (re-scheduling maintenance and judicious the reproduction of cattle, development plan matings, daily screening of females in heat, but the age-Seed and the optimal time of females, following "return" them), pregnancy diagnosis, tracking of uterus involution after calving, 7 - 14 days practicing gynecological exam monthly at cows with reproductive disorders, conduct diagnostic and therapeutic accurate and timely recording of all reproduction phenomenon analysis etc. Also necessary: reduce losses to a minimum by appropriate technical and material facilities for veterinary use, general preventive measures, screening measures infectious and contagious and parasitic diseases, specific preventive measures (vaccinations), measures of prevention and fight against other diseases and disorders, reproductive disorders in particular occurred during the parturition and post-partum and pregnancy.

These studies will be developed and approfundated in the Romanian Academy, Bucharest, Centre of Studies and Researches for Agrosilvicultural Biodiversity "Acad. David Davidescu" in the Postdoctoral School.

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EFFECTS ON TOURISM AND SUSTAINABLE DEVELOPMENT OF AGRI-FOOD SECTOR EVOLUTION IN SOUTH EAST ROMANIA

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Abstract: *Currently there is a need to pay particular attention to the environment, the planet's non-renewable resources and man. Punctual, rural areas need an overall strategy on environmental protection and a specific strategy for sustainable development. Therefore, economic development should be based on appropriate strategies ecological limits provided by the planet by the environment. Even rural tourism potential can be harnessed properly through various actions and multiple levels through collaboration of public and private responsibility. Priority should be those forms of tourism to save the planet's resources and avoid, whenever possible, waste generation. Economic growth and sustainable development of tourism must be permanent, but safe and sustainable to meet the aspirations and needs of current and future generations.*

Key words: *sustainable development, environmental protection, economics, sustainable tourism, tourism potential.*

Introduction

The issue of global environment and sustainable development concept premises were discussed for the first time in Stockholm in 1972, at the Conference on Human, held under the auspices of the United Nations (UN). Discussions focused mainly on environmental hazards and natural resources from industrial pollution and economic development at any cost. A few years later, in 1987, proposed an integrated Brundtland Report, that the term sustainable development, referring to the decisions and policies of environmental protection and economic growth in the long term.

In 1992, the UN Conference on Environment and Development in Rio de Janeiro, were adopted Agenda 21 and the Rio Declaration on Environment and Development. Here were the overall management decided consensus principles, conservation and sustainable development of forests and to open a list of signatures to the Convention on Climate Change and Biological Diversity. These two international documents clearly support the need for sustainable development. Besides the economic and environmental introduces another variable Conference in Johannesburg in 2002, namely social justice. It outlines here, the idea of developing sustainable equity bringing together environmental sustainability and improving social equity. Thus, sustainable development must aim to improve quality of life for all people, manage as well as possible and to protect ecosystems, provide the basic needs of humanity and to ensure its future prosperity, sure.

Sustainable development meets clean solutions, alternative development models and rethinking consumption and production methods used today, the aim being to avoid geo-bio-chemical imbalances. Rural development brings together instead all activities that improve quality of life in rural areas. It is based on sustainable growth, having as main objective to maintain the natural, spirituual, material and cultural village.

Implications on rural idea is underlined by a number of principles formulated in the Declaration of Cork (Ireland) in 1996. These are general principles of sustainable rural development and are written in the European Charter; of these, the most relevant being: sustainability, assessment, research, mentoring, creating diversity mainstreaming and implementation of the rural foreground. With them were set itself objectives of sustainable rural development, upward evolution of socio-economic development of rural areas and rural communities preserve traditional customs.

Materials and methods

Our planet has limited capacity to support humanity that is in continuous development. Therefore should apply as soon as the coordinate activities sustainable. Tourism is growing economic segment of about 7% annually. He is due to upward rate, along with other economic activities, the attention of specialists concerned about irreversible environmental destruction.

At the World Conference on Sustainable Tourism, held in 1995 in Lanzarote, was accepted definition of sustainable tourism as balancing business interests with nature. Also there was born the now well-known phrase: "without such travel is not possible on the environment can exist without tourism."

Sustainable tourism is an economic activity is to satisfy tourists current generation without compromising the ability of future generations to have at least the same amount of tourist resources and even the same quality.

Wishing it to be a sustainable tourism must carefully plan the use of resources to avoid jeopardizing the tourist and business travel.

For all of them require some general principles apply sustainable development principles to be observed in tourism: environmental protection, flexibility, efficiency, social justice and inter intrageneraţii.

If sustainable development is based on a total of five (5) lines (research, production, resource management, performance evaluation, services and mobility management) and sustainable development of tourism benefits from several major principles.

One of these relates to the environment, which has lasting value and should remain so for future generations.

Then there is the principle of respect for the place used by tour operators and features of ecological, cultural, economic and social.

Another principle is based on the fact that medium-tourism relationship must be so operated so that the environment can sustain long-term tourism activity and tourism development without environmental degradation reach.

Finally, another basic principle supports the idea that we must look at tourism as a positive activity beneficial to tourists, local community and environment.

But to support this idea require a rigorous and appropriate tourism planning situation. This planning can also create favorite conditions of exploitation inclusive environment for the practice of sustainable tourism, to avoid unwanted issues related to environmental

degradation and non-renewable resources, but also to the preservation uicității tourism potential through tourism forecasting feasible.

Results and discussions

» Hypotheses of the research
Methods of analysis and evaluation were selected based on several criteria in order to obtain accurate and true view of the evolution and prospects of sustainable tourism development of the South-East. This development is driven by important tourist resources found in the region and the tourism potential in the Southeast Region.
In this geographic area can be found various native forms, starting with the fundamental values of human existence and reaching specific elements found in tourist attractions. They operated in optimal shape generates added value of local community development. As a result, the research directions pursued objective analysis of the quality and diversity of regional tourism resources and how to exploit them in the current context of sustainable development.
Ecosystems are offering tourists a variety of recreation services, with a high monetary value, known as recreational value. Biological diversity of its recreational and aesthetic qualities gives joy to people, leading to improved quality of life.
Tourism is contributing to inclusive economic development of local communities, bringing revenue by selling beds, the table, the souvenirs and other tourist areas are supported only if it envisages infrastructure development, existing premises, etc, and creating new jobs for local people. This can develop, refine and revive local handicrafts, prosper materially and consolidating local cultural identity.

» Means and tools of research
Region synthetic analysis was based on tourism potential diagnosis means and forms of exploitation and potential tourist facilities, which come in addition to the strategic perspective of development of the material base necessary to practice sustainable tourism. Not overlooked gap problem in time, determined by the difference between the potential of tourism and tourist facilities. It reveals, thus the need for technical and material progress by adopting financial and human efforts to equip and modernize outstanding, primarily infrastructure. Hence, the specific objectives arise that analyzes need to establish concrete directions, taken from the general, and resulting in the application of clearly defined actions that builds conduct this scientific research.

» Research results and interpretation
South East accounts for nearly 13% of Romania's total population, the fourth region the importance of the population
It also ranks as the sixth level of socio-economic development compared to other regions of Romania. Industry and agriculture are the main economic sectors, generating about 44% of the region's GDP. Landforms together here all the formations present in Romania-field (Bărăganului and the Covurluiului), hills (sub-mountainous area outside the Carpathian and Macin Mountains) and mountains (Eastern Carpathians), delta (Fig. 1).
The maximum altitude of the South East recorded the top Goru, 1.785m, Vrancea County.
The region is traditionally fishery and agriculture, taking first place in the living area on the rod. Tourism contributes about 3% to the regional GDP, generating more jobs in trade, transportation and construction plus the hotels and restaurants (Fig. 2).

Fig. 1 - Romanian South East Region
(source: http://www.crgalati.gnm.ro/competenta.php)

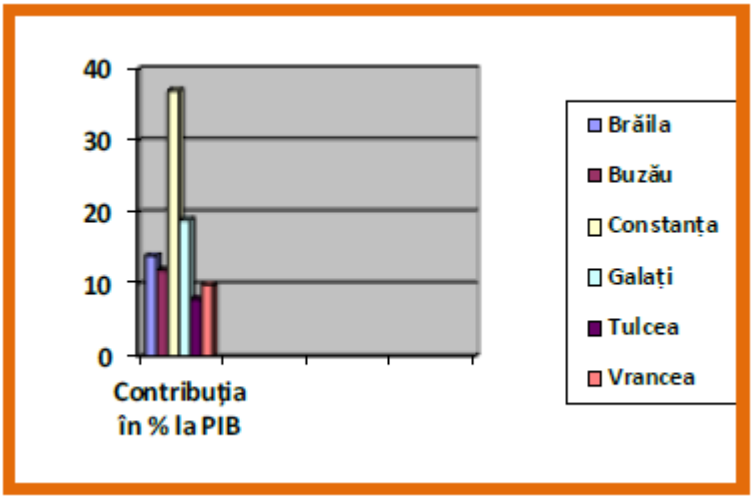

Fig. 2 - Percentage contribution of the counties in the South East to GDP
(Source: Romanian National Institute of Statistics - 2012)

Region's economic engine Constanta County contribution to over a third of regional GDP. South East has a diverse range of tourism resources, being able to practice coastal tourism, cruise, spa, mountain, scientific / environmental, fishing and hunting etc.. Unfortunately tourism development is not uniform; there are large regional differences in terms of dynamics and its level of development.

The main tourist attraction is undoubtedly the Black Sea, which groups the 13 stations 40% of the accommodation capacity nationwide and account for about 20% of annual nights at national level. Among the main concerns of tourism providers in the region are extending the season and raising the quality of services that can compete with offerings on the Bulgarian seaside.

Another tourist attraction is the Danube Delta, considered one of the most attractive areas in Romania, due to the rarity and unusual items. Spa tourism constitute strength of tourism in the region, it is well represented by national or regional stations sounding like Salt Lake Techirghiol, salted

Monteoru or White Marsh.
Cultural tourism is also represented by the monasteries in northern Dobrogea (Celic Dere and Saon Rooster and the mountain from Buzau and Vrancea counties, namely existing museums and ruins of many cities.
Lately entered into a number of regions agro attention in Buzau (live shots Lopătari, mud volcanoes in the commune Berka) and Vrancea (Soveja - Lepşa-Tulnici) times the highest concentration of flora and fauna country Macin Mountains, where a relatively small area is more than 50% of species of flora and fauna of the vineyard României.Crama Murfatlar is another attraction for tourists.
Coastal and delta tourist attractiveness influenced the development and increased investment in accommodation. In this category are included tourist attractions and various events with an impact on tourists, supporting the growth of tourism activities during the run.
Rural Wealth is hardly visible in Romania for foreign tourists, mingling with "the myth of Dracula."
Romania seems an unattractive tourist destination, the obvious lack of a strategy to promote traditional heritage, identity and authenticity Romanian.
Enhancing public information activities, the expansion of urbanization, increased leisure vacations are dedicated following possible processes of diversification and expansion of service industries.

Conclusions

For tourism assets to seek a different vision, orientation linked to scientific research that deepens the natural and human potential recovery priorities is a need for modernization, restructuring, development of heritage tourism (Fig. 3 and 4).

It is necessary to further develop studies that sustainable tourism development policy capable of meeting the requirements to support current market prioritization. Tourism forecasting studies can help to turn the tourism providers in developing their strategies, feasibility studies for medium or long term prognosis.

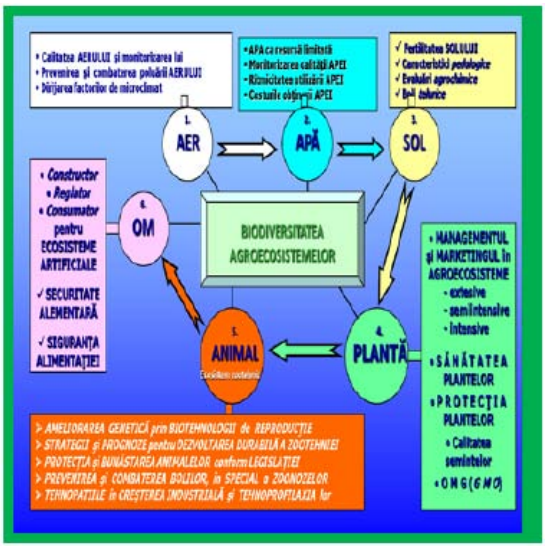

Fig. 3. - Circuit biodiversity of agroecosystems (Author: Acad. Bogdan T. Alexandru)

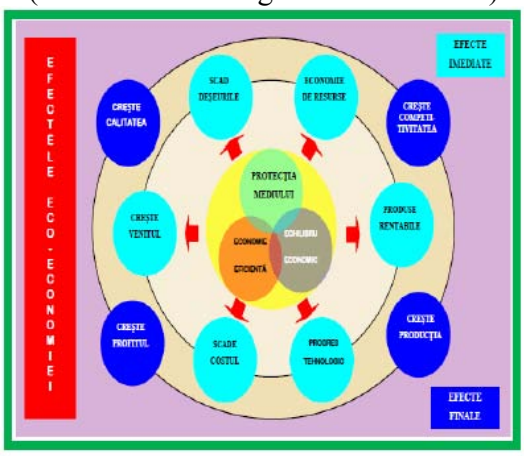

Fig. 4. For the growth of the global economy (Author: Acad. Bogdan T. Alexandru)

A team of experts from the World Tourism Organization have developed with Romanian counterparts on behalf of our government a master plan for tourism development in Romania. Its aim is to develop an

analysis showing the weaknesses of the domestic tourism. Thus, they can be made some strategic directions restructuring, regeneration and providing the necessary resources so that Saa become globally competitive.

This plan carefully studying all apparent deficiencies in the way rural development deficiencies relationship with the private public sector inefficiency of public management, development planned pace, marketing and implementation of its policies, human resource training services, no statistical basis for analyzing the real situation. The above aspects should be followed, changed or improved if it needs to retrieve a solid development and promotion.

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SUSTAINABLE DEVELOPMENT AND THE NEED TO IMPLEMENT A SYSTEM OF QUALITY MANAGEMENT IN BARSA COUNTRY, AGRI-FOOD SECTOR (THE REGION TRASYLVANIA)

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Abstract: *The concept of sustainable development is relatively new in modern economic literature, he tried to translate as accurately as the English word „sustainability". The debate on the concept of " sustainable development " have not yet led to a coherent point of view theoretical and methodological aspect , but the extent and intensity of organized provides an opportunity to lucid assessments of current models of economic and social development , located in an obvious conflicted with conservation of natural capital. Growth and development inevitably involves changes in ecosystems, and therefore economic policy development should be designed so that no rational harm the natural environment and the human factor, either now or in the future. We emphasize in this context that the effort to preserve natural capital is not intended to restrict the economic and social activity but to ensure its functionality as a prerequisite organizing and carrying out technical and productive processes. Thus implementation of an integrated quality management in rural tourism appears as a necessity to ensure sustainable development.*

Key words: *economic growth, sustainable development, quality system, tourism sustainable.*

Introduction

In the last years, a new concept of sustainable development and sustainable development remarked. This concept emerged and acquired meanings precise aiming globalization context. Cementation concept was made along the numerous scientific debate where the topic has been analyzed in depth.

The concept of sustainable development means undoubtedly integrated approach to decision-makers and policy concept are introduced as important, and long-term complementary and dependent, so the concept of environmental protection and the economic growth.

The Limits to Growth and Meadows Report (Report of the Club of Rome in 1972), was reported for the first time that either economically or in terms of social , countries of the world will no longer be separated in any way from the influences of human activities on the landscape.

In Meadows Report five parameters (ie the damage of pollution, the impact of industrialization, the total production of food, population growth and the depletion of natural resources) are described. From this description it is clear that currently applies to a development model which, unfortunately, can not be used long term.

Since the first UN Conference on the Environment (held in 1972 in Stockholm)

were noted the concerns of the international problem of human and environmental report. These concerns materialized in 1985 with the advent of the World Commission on Environment and Development.

The Commission's report was presented two years later by GH Brundtland, Our Common Future named . In this report the first universally accepted definition of sustainable development appeared: "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs". [1]

The Conference on Environment and Sustainable Development (Rio de Janeiro -1992), then the UN General Assembly Special Session and addressing the Millennium Development Goals (MDGs - 2000) and, not least, the World Conference on Sustainable Development (Johannesburg - 2002) major issues related to sustainable development have transformed global political issues . Therefore, timely action programs arose, both locally and globally (Agenda 21) contained in an already well-known adage "think globally, act locally"[2].

As a result of this situation , they adopted some international convention that settled precise obligations and strict implementation deadlines of the states on the protection of forests and wetlands, climate change , limiting the use of certain chemicals, biodiversity conservation, access to information on the state of the environment and others, which outlines the international legal space, a space that has arisen in the application of the principles of sustainable development.

Humanity is, as we already know, a subsystem of the ecosphere; subsystem dependent on energy and material flow of the ecosphere, dependent subsystem also stability and capacity autoreglatorie .

On this basis and policies have been developed, such as, for example, the National Strategy for Sustainable Development of Romania. These public policies aim to restore and maintain long-term balance between the integrity of the natural environment and economic development. As a member of the European Union in Romania, the only perspective (in terms of national becoming, steadfastness new paradigm that combines social, environmental and economic) is sustainable development.

Materials and methods

The concept of sustainable development is based on concern for the environment , adding itself, moreover, economic and social dimensions. Although initially sustainability wanted to be a solution to the ecological crisis, debt crisis intensity industrial exploitation of resources and the continued degradation of the environment and seeks primarily to preserve environmental quality now expanded concept of quality of life in its complexity, both in economically and socially.

The concept of sustainable development means all forms and methods of socio-economic development whose foundation is to ensure the balance between the socio -economic and natural potential.

There are major principles and key objectives of sustainable development principles and objectives that describe, on fairness and balanced attitude between countries but also between generations, cultural diversity, social cohesion, respect for fundamental rights, equal opportunities, combating any discrimination.

It is also envisaged economic prosperity by encouraging competitiveness, promoting knowledge and innovation, thus increasing living standards, the number of jobs, the

EU fulfill international responsibilities by promoting democratic institutions.

While consolidating the principles of sustainable development and its application sector appeared.

The theoretical approaches were outlined by the World Tourism Organization (UNWTO). This organization, like other UN bodies , began applying the principles of sustainable development in tourism.

At the summit in Johannesburg in 2002, some of the UNWTO Tourism experts have presented their views on sustainable development in conjunction with the development of world tourism.

They stressed that all forms of tourism activities and directly related to the environment, its components become valuable resources exploited by tourism are created those products using environment-specific resources and their marketing giving them an important added value . That is why tourism revenues are much higher than natural resources and human use. Therefore, it highlights the strong and clear interdependence between the environment and tourism.

European Commission through the Communication of 19 October 2007 entitled Agenda for a sustainable and competitive European tourism proposes some principles coming to help achieve the main objective, namely the transformation of current tourism into a competitive and sustainable.

These principles include: integrated and holistic approach to practice a balanced tourism, and environment friendly society; control the pace of development by observing the characteristics of each tourist destinations; long-term planning, because we must not forget that the present generation is not only important, but also the future; precautionary principle, meaning reduce and manage risks, prevent harmful effects on society and the environment, etc. [3].

Application of these principles requires the use of the best information currently available, circulated to all stakeholders, sharing best practice on the practice of sustainable and competitive. For this, there is active and ongoing support of the European Commission by editing various studies; publication of books on the principles of professionalism in tourism; support tourism education and training transnational tourist industry; organization of statistical databases and geographic Tourist annual reports using the Member States; providing best practice international organizations and others; cooperation between higher education institutions, research institutes; creating different e -learning platform; supporting and assisting the formation of endearment between tourist destinations; conferences; organizing the annual European Forum on tourism, etc.

» Means and tools of research

The methodological basis of research knowledge is dialectical method, device and philosophical categorical general systems theory, comparative analysis method.

» Hypotheses of the research

Improving quality is essential for the Romanian tourist destinations tourists needs to relaunch tourism industry competitiveness and ensure sustainable and balanced development of rural tourism, the Romanian tourism recovery factor.

Quality exists only to the extent that the needs and expectations of consumers. Consequently, the individual elements that make up a strategy based on quality standard requires a thorough knowledge of tourism.

What we proposed in this study highlight the role of integrated quality management in tourism so as to ensure sustainability, based

on the situation in one of the representative areas of Romanian rural tourism - the Country of Barsa.

Results and discussions

Lately it notes that forms of tourism in major centers crowded with programs fixed, rigid, dull, with shifts in a busy environment to another, does not satisfy the aspirations, motivations, choices of tourists. They prefer the rural areas that offer an unpolluted environment, the natural and cultural potential slightly altered. Such an area, which is part of the rich heritage of the Romanian tourism is Barsa, located approximately in the center of the country, the internal curvature of the Carpathian arch, representing an area of continuity between the Eastern Carpathians and the Southern [4]. Barsa to Transylvania, is nothing less than a city between mountains. In this natural fortress on the border between East and West, met the roads of history and civilizations, with their extraordinary ethnic and cultural infusion with constant movement of people and values. Geographers have defined, Barsa "by, Barsa depression" which covers the space between the mountains Perşani (western) mountains Bodoc - Baraolt (north), Vrancea Mountains (East), Mountains Ciucaş - Bars - Bucegi - Piatra Craiului (south). However, ethnographers extend Barsa including Olt basin and Black River up to St. George, respectively Breţcu.

It is a region with complex ethnographic character with the presence of groups of Csángós Romanian and Saxon population - the latter area called Burzenland). It has a strong near Brasov city by famous commercial city and crafts.

Architecture reveals the popular villages near Brasov (Cristian, Rasnov) a strong urban influence, while settlements from Zarnesti fall in all folk architecture.

In the villages of sub Bran detour houses are closed, due to their need for protection and insulation. Domestic construction industry of such houses are grouped in a confined space around a courtyard square or polygonal. Brasov Depression or Barsa Barsa includes Csángós area. Barsa territory is now three cities (Brasov, Codlea and Săcele), three cities (Ghimbav, Rasnov and Zarnesti), and a number of 13 municipalities (Apata, Bod, Bran, Cristian, Crizbav, Dumbrăviţa, Feldioara Hălchiu, Harman Măieruş, Prejmer, Sânpetru and Vulcan) and 29 villages, initially on an area of 79375 ha and has a population of about 130.135 inhabitants.

A) Touristic Context

Barsa a crowning archaic and medieval modernism represents a milestone for Romanian rural tourism. Enchanting natural scenery, picturesque villages located up to altitudes of 1000 meters, genuine popular culture, preserved in original form, pastoral and culinary traditions well preserved were the main premises of the emergence and development of tourism in this rural area. Barsa natural tourism potential is very rich, noting the following:

- Săcele area: Seven Stairs Canyon Waterfall in calcareous Tamina, Ice Cave Piatra Mare (The Big Rock) gap Bear Cottage and Hill Bunloc;
- Rasnov area: Râşnoavei Keys Raşnoava Cave, Valley City Cave;
- The Harman: protected sites (Natura 2000) City Lempeş, Hill - Swamp Harman;
- The Prejmer: Forest and eutrophic fens from Prejmer with variegated tulip;
- The Crizbav: the Natural Reserve "Dumbravita" ("Transylvania Delta") .

The anthropic tourism potential particularly valuable brings its contribution to tourism

development in Barsa being the numerous historical relics such as Râsnov Citadel-14th-18th centuries, Evangelical Church Assembly-14th-18th centuries Rasnov archaeological site "Castle Hill" Rasnov Fortified Church-13th century the Harman Fortified Evangelical Church – 13th-19th centuries Prejmer Prejmer and Castle Cottage (site area) 15th-19th centuries, the medieval Citadel Crizbav Heldenburg-11th century and archaeological site Crizbav.

By far, however, Bran Castle stands out as a genuine stone, which is the point of maximum attraction of Barsa with sights located in the city of Brasov. Since our research is to the study of rural areas , we reserve the right not to present the attractions located in Brasov without diminish the importance they hold in attracting tourist flows.

A feature that creates homogeneity in the analyzed region is the historical and cultural heritage. Multicultural character of the whole area is reflected in the architectural and cultural heritage . Municipalities meeting in "Barsa" specific preserves cultural heritage cohabitation Saxon Romanians, Hungarians, Roma (gipsies-now majority).

Dumbrăviţa village has retained strong Romanian specificity, especially with said privileges on autonomy for cities in southern Transylvania who formed Regiment of the Austro-Hungarian border.

In six of the seven communes: Harman Hălchiu, Bod, Sânpetru, Feldioara Crizbav, which belonged to the Teutonic Knights in Barsa famous architectural relics are preserved fortified churches built in 13th century [6].

Culture nationalities other than Romanian, is still present in the architectural style in folk customs, gastronomy.

In Barsa there are some areas with a high concentration of agrotourism pensions ZARNESTI and Bran. In Bran, the most important area agritourism, architectural objective of national importance - Bran Castle, the14th century includes several villages that are located on about 20 km long, of which the best known are: Moeciu (Moeciu - Upper near the slope Bucegi respectively Netherlands); Pestera - an aninous village in a mountain foot with Magura and provide insight to the heights of Bucegi and Piatra Craiului; SIRNA, located in a valley lime, background, whose houses are strung on several hills. Sub Bran – Bran - Background, situated between Bucegi and Piatra Craiului Mountains, in the northern part Rucăr Bran is the area with the most developed rural tourism in Romania.

Accommodation Infrastructure in Barsa is quite well represented, the highest concentrations being found accommodation in Bran. In the first decade of the twenty-first century Bran was a strong development of tourist accommodation infrastructure, Bran Moeciu area is considered the cradle of Romanian rural tourism. Here many holiday homes, cottages, villas and private guesthouses were built. Infrastructure catering is represented as operating restaurants inside hotels or motels, as well as boarding houses.

Within these tourists can enjoy food served by the host and can cook yourself. It must however be noted that based tourism in the region is partly outdated, lack of modernization affecting the quality of services offered to tourists.

Network accommodation facilities has the largest concentration, representing 39.9% of all units in the Central Region of interest (Table 1). It should be noted that the total pensions Barsa registered, 16 of them are registered in the Romanian pensions Asociations for Bed and Breakfast Tourism Brasov (B & B ARCTE).

Table 1:
Accomodation structures in Barsa (2013)

Types of tourist accommodation	No.of accommodation
Guesthouses	139
Farmhouses	115
Tourist Cottages	27
Hotels	62
Motels	4
Hostel	8
Villas	42
Holiday Homes	15
Bungalow	1
Camping	2
Holiday Village	2
total	417

Source:[5]

Most tourists visiting Barsa are Romanian, the proportion of foreigners is approximately 20 %. The geographical area of origin of foreign tourists includes most European countries and some non-European countries (U.S., Canada, Israel). Most foreign tourists from countries geographically close, providing traditional tourists (Hungary and Austria in particular, Poland, Czech Republic, Slovakia), but there is a significant number of tourists coming from more distant countries (countries of western Europe Israel, USA).

As the number of tourists, in the year 2012 there were 794 000 tourists. Number of overnight stays rose from 1956 6000, of which 17.8% is the share of foreign tourists. Net use index of accommodation capacity in operation is about 19.63 % for 2012.

B) Strategy

Since 1991 the interest in rural tourism in Romania and also in Barsa revives. The natural consequence of this interest was the occurrence of Law nr.145/1994 - the establishment of facilities for the development of rural tourism in the mountains, the Danube Delta and the Black Sea (Government Ordinance no.62/24, 08.1994) and the Order of the Ministry of Tourism no.20/1995, on the rules and criteria for classification of Pensions and Agrotourism farms, as amended by Government Decision no. 1.328/2001. Because farming was practiced on a smaller scale due to poorly productive land and climy cold aging based firm, was not developing a viable source in the mountains (Bran) decided that the only way forward is to develop a common strategy for agriculture, crafts and tourism, based on cooperation between young entrepreneurs in the tourism sector and young farmers. On this basis strategy launched ANTREC Brasov, aiming to create an image for the entire area covering rural, agricultural and rural craft objects linked by - a common identity for the following purposes: increasing the use of local agricultural products and thus enhance the viability of farms; increase awareness of the vital role of the farmer as the creator and guardian of culture and landscape; networking between producers, processors and retailers; encouraging direct consumption of local products, reduce costs and pollution related to transport and offer an invigorating experience quality for all consumers, including tourists.

Romania's EU accession in 2007 opened access to European funds, small farms and Leader Objective 5b.

Barsa levels, rural tourism has been defined as one of the major priorities of regional development (Priority 3rd of the Regional Development Plan 2007-2013), this area can support and boost socio-economic development of the area in the future. Objectives have resulted in:

-Conservation of natural , historical and cultural ;

-Development, diversification and promotion of tourist offer;

-Creation, development, tourism infrastructure for sustainable exploitation of natural resources and to increase the quality of tourism services;
-Development of cooperation between the public and private sector;
-Understanding the needs and expectations of existing and potential markets;
-Helping companies meet these needs through training and counseling;
-Establishing and promoting qualities.
These developments included in the Development Plan for the Central Region for the period 2007-2013 correspond to the three major areas of intervention under Axis 5, tourism development and promotion of the Regional Operational Programme (ROP), the main instrument through which local and regional authorities, NGO (non gouvernmental organizations) and companies in the region can benefit from the significant funds grants to develop tourism.
Currently, the area Barsa are implementing projects that will have a significant impact on the development of the tourism sector in the region. Also, Priority 4th, Rural Development "Regional Development Plan 2014-2020, explicitly supporting tourism and rural tourism activities . Following the establishment of the regional priorities in the National Rural Development Plan 2014-2020, the Axis, Quality of life in rural areas and diversification of the rural economy, „includes specific tools to support the development of the tourism sector in rural areas such as Measure 3.1.3-Encouragement of tourism activity, and Measure 3.2.2., Village renewal and development, improving basic services for the economy and rural population and upgrading of rural heritage". Also, some measures under Axis 4 (LEADER) contributes indirectly to tourism development in rural areas of Barsa.

C) The importance given to quality
This has led to an initiative called "Quality Tourism" by GAL ANTREC Braşov County Barsa and quality applying here for all processes carried out in rural areas. Was realized that in order to create a quality product was necessary to conduct a thorough evaluation of resources, farmers and their opinions, as well as potential and existing tourist markets.

D) Leadership and Partnership
In the area Brasov, the Metropolitan Agency was remarked, since its inception (in 2006) as a promoter of sustainable development in the area. Between 2006 -2008, the team of the Metropolitan Agency initiated a series of partnerships with local action groups in Hungary to exploit their experience regarding local development efforts LEADER. The Metropolitan Agency Brasov took over the coordination of this potential Local Action Group called Barsa Land, together with the coordination of the preparation of the Local Development Plan. An important statement to be made is that throughout the development of the Local Development Plan was envisaged achieving social, economic and territorial to the whole territory. Basically, it was intended to maximize the potential of Barsa Land territory, in complementarity with the intentions expressed in the strategic development of the Centre Region, County Brasov, Covasna County (with Barsa County is bordered to the north) of the Growth Pole Brasov and territory curvature Carpathians represented by the association[6].
Regarding the development of rural tourism quality and Arctic ANTREC Brasov Brasov B & B have provided favorable conditions to achieve this goal in collaboration with FMT Managerial Training in Tourism SRL Brasov.

The centralidea was to establish a working partnership between business and NGOs resulting in improving the quality of rural tourism.

Agency for Sustainable Development of Brasov (ADDJB) and the Association for the Promotion and Development of Tourism in Brasov (Brasov APDT) implemented, as beneficiaries, beginning in March 2011, the "unforgettable cultural experiences in the heart of Transylvania" (SMIS code 18536). The project was financed by Regional Operational Programme 2007-2013, Priority Axis 5 - Sustainable development and tourism, KAI 5.3 - Promoting tourism potential and creating the necessary infrastructure in order to increase Romania's attractiveness as a tourist destination.

Agency for Sustainable Development of Brasov is the recipient of the "Mobility in the LEADER approach for the Employees of the Local Action Group Brasov North Transylvanian Association - MobiLEAD" funded by the European Commission through the Leonardo da Vinci - "Lifelong Learning" (LLP-LdV/PLM/2013/RO/095).

Within its five employees of the Local Action Group Association "Braşov Transylvanian Association North" (GAL ATBN) attended a two-week, training course in a GAL experienced another EU Member State (GAL Piceno-Italy) to develop professional skills in line with identified needs and personal development by encouraging foreign language learning and facilitate the cultural dialogue .

E) Initiatives in marketing and tourism product development

Initially conducted a full audit of facilities and tourist services, cultural and natural heritage and related infrastructure, then realizing a comprehensive study on consumers of tourism services. This study revealed a difference of opinion between individuals Barsa visited and those not visited. The first category has highlighted the beauty of the natural, acceptable and food prices and the nature. The second category, however, said that it is a monotonous area with high tariffs. Advertising materials (guides, booklets, brochures, TV spots, websites dedicated), arrangement of tourist information centers and points, proper signaling sightseeing conducted by the Association for the Promotion and Development of Tourism Brasov contribute significantly to attracting and maintaining interest Barsa. Promoting tourism is generally aimed at unlocking the potential of cultural tourism identity Barsa and strengthening the area through the promotion of specific tourist products (fortresses and castles, monasteries, fortified churches, folklore and folk art) and initiating innovative and dynamic marketing activities to increase the attractiveness of the area as a tourist destination nationally.

The major role is to work ARCTE B & B Brasov which aims to promote system bed and breakfast and finding approaches modern tourism potential area and location, create new jobs, facilitating cultural exchanges between the host and guest.

F) Managing the impact of tourism

Tourism activity in rural areas has caused some environmental problems.

The increasing penetration of housing units in natural, initially sparked discontent among the local population, but new economic opportunities through tourism results are now appreciated. Training programs included courses in environmental management by tourist establishments.

G) Results and future prospects

The process of creating a quality product based on market research, through an integrated initiative group is created. It remains to be seen whether the marketing of these programs will be easy.

There is a new spirit of cooperation in order to improve the experience offered to tourists and to carry out joint initiatives in product development and marketing that helped to stimulate creativity.

New training programs involving youth and linking tourism and environmental heritage bode well for the future.

H) Key factors of success

- The role of innovative local development agency;
- Audit of the products and gather opinions about rural service providers;
- Efficient use of study tours abroad;
- Cooperation to create a specific product application;
- Offering a product incorporating rural experiences.

Conclusions

It appears that in Barsa a quality management system in an incipient form was initiated. Destination studied evokes all the reasons to justify the recent interest and sometimes suddenly by an integrated approach to quality rural tourism destinations. Improving quality is essential for the Romanian tourist destinations tourists needs to relaunch tourism industry competitiveness and ensure sustainable and balanced development of rural tourism, the Romanian tourism recovery factor.

Quality exists only to the extent that the needs and expectations of consumers. At the level of a tourist destination, total quality management can be understood as a process of systematic research of internal and one external qualities that ensure economic growth in the short and long-term local development.

Orientation to the implementation of integrated quality management system should be a careful and immediate concern to all those involved in the sustainable development of Romanian rural tourism.

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