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THE ANALYSIS OF THE AGRICULTURAL HOLDINGS STRUCTURE IN THE COMMUNES BISOCA, PIETROASELE AND GHERĂSENI, BUZAU COUNTY

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SUMMARY: *This paper represents a first part of a larger study on three villages in Buzau County using a questionnaire implemented in three different geographical areas villages. There are showed some descriptive statistics based on data from the questionnaire. These statistics help us to better illustrate the reality of the analyzed villages. Are shown agricultural holdings structures by the owned group area and after the exploited area, aiming to describe the exploitation area level, the agricultural machinery provision and the production disposed for sale. All these manage to outline a picture of agricultural holdings in Buzau county, image needed to find solutions to the county agriculture development.*

KEYWORDS: *agricultural holdings, surface owned, exploited surface , agricultural machinery, production.*

INTRODUCTION

The agriculture is an important economic activity sector of Buzau County, in this respect remarking the special quality of arable land.

Potential land resources of the county is placed on the three forms of relief, namely: plain (where predominates the arable land), hill (the vineyards and orchards are specific branches) and mountain (where animal husbandry is based on extensive areas of pastures and meadows).

To mention the predominance of agricultural land, hence the the need of structural knowledge of farms in Buzau.

In the mountain agricultural field (Bisoca village) inhabitants know and correctly interpret the fundamental relationships of the key factors: land, fodder plants, animals and farmers. Resources on which the locality economic potential rely on are only own resources (forests, agricultural land, plant products, animal products) [2].

In the hilly agricultural area village (Pietroasele), a large part of the inhabitants are engaged in agriculture, taking advantage of the hilly area with favorable conditions for vineyards, field crops and wood processing [3].

The specific of Gherăseni village is agricultural , respectively the cultivation of cereals, corn technical plants and animal breeding. Agricultural land fund is the natural source of the village . The dominant function being the development of the two main branches of agriculture: production of crops and animal breeding [4].

MATERIAL AND METHOD

As a method for obtaining the appropriate data for the study it was used - the survey. In preparing the questionnaire , we made the following steps: setting goals, defining the population, establishing the data collection method, the questionnaire actual development. It was established first, a representative sample of three villages, that were selected from three different areas as relief (village Bisoca - the mountains, the village Pietroasele-hilly and plain- Gherăseni village) in Buzau County. 90 people were interviewed, 30 from each village , and the selection has been accomplished randomized.

To give the scientific relevance of the study and highlight the impact of the results, we chose to use statistical indicators of association, Chi square test. This indicator involves verifying the hypothesis of association between responses obtained in a questionnaire alternatives of questions and checking a particular set of data that can follow a known statistical distribution.

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RESULTS AND DISCUSSIONS

Table no. 1. The agricultural holdings structure belonging to respondents by area in property and geographical area, 2012

Relief area Surface	UM	Mountains	Hill	Plain	Total	
	<1	ha	2	10	5	17
%		11.76	58.82	29.41	100.00	x
1-3	ha	14	8	10	32	35.6
	%	43.75	25.00	31.25	100.00	x
3-6	ha	8	7	11	26	28.9
	%	30.77	26.92	42.31	100.00	x
6-9	ha	4	3	1	8	8.9
	%	50.00	37.50	12.50	100.00	x
>9	ha	2	2	3	7	7.8
	%	28.57	28.57	42.86	100.00	x
Total	ha	30	30	30	90	100.0
	%	33.33	33.33	33.33	100.00	x

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

- Agricultural holdings studied by the surface in property (Table 1), are classified into 5 groups, namely:
 - holdings with an area less than 1 ha, with 17 (18.9% of total), of which most are located on the hill - 10 holdings (58.82%);
- Holdings with area between 1 and 3 ha have the largest share 35.6% of the total (32), of which the most numerous - 14 holdings in the mountains (43.75%);
- The the surface between 3 and 6 ha, we find a total of 26 holdings , the plain has the most representatives, 11 with a share of 42.31%;
- Between 6-9 ha the holdings have a smaller number, 4 in the mountains, 3 to hill and 1 plain, with a percentage of 8.9% of the total;
- Holdings exceeding 9 hectares are fewer in number, their distribution on areas is similar, two in the mountains, two to the hill and 3 in the plains.

Table no. 2. Structure of agricultural holdings belonging to the respondents after the the surface in exploitation, on geographical area, 2012.

Relief Area Surface	UM	Mountains	Hill	Plain	Total	
	<1	ha	2	16	6	24
%		8.33	66.67	25.00	100.00	x
1-3	ha	11	8	11	30	33.33
	%	36.67	26.67	36.67	100.00	x
3-6	ha	10	3	9	22	24.44
	%	45.45	13.64	40.91	100.00	x
6-9	ha	4	1	1	6	6.67
	%	66.67	16.67	16.67	100.00	x
>9	ha	3	2	3	8	8.89
	%	37.50	25.00	37.50	100.00	x
Total	ha	30	30	30	90	100
	%	33.33	33.33	33.33	100.00	x

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

Analyzing Tables 1 and 2 we can make a comparison between the surface which respondents have in property and the one they exploit .

Due to the population aging high degree and the lack of material and technical basis for the owned area exploitation , many of the respondents answered that they prefer to lease the

land, but there are few who have exploitation possibilities and take on lease land, so the exploited area is greater than the one they own. It can be seen in the table with the surface in exploitation (Table 2) compared with the surface in property (Table 1), that the number of respondents who have an area less than 1 ha increased from 17 (property) to 24 (exploited) (26.67%) of the total, decreasing the number of those who exploit between 1-3 ha and 3-6 ha (57.7%), meaning that some of those who have in property land in these two groups prefer to lease some land.

The more explicit comparison is shown in Table 3.

Table no. 3. The land exploitation level analysis, owned by respondents.

Structure of holdings by area in property	Structure of agricultural holdings by the exploited area							
	UM	<1 ha	1-3 ha	3-6 ha	6-9 ha	>9 ha	Total No / %	
<1 ha		11	3	x	x	1	15	16.67
		73.33	20	x	x	6.67	100	x
1-3 ha		7	23	4	x	x	34	37.78
		20.59	67.65	11.76	x	x	100	x
3-6 ha		2	6	15	1	2	26	28.89
		7.69	23.08	57.69	3.85	7.69	100	x
6-9 ha		x	1	2	4	1	8	8.89
		x	12.50	25	50	12.50	100	x
>9 ha		1	x	2	x	4	7	7.78
		14.29	x	28.57	x	57.14	100	x
Total		21	33	23	5	8	90	100
		23.33	36.67	25.56	5.56	8.89	100	x

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

Material and technical base.

Table no. 4. The number of machines owned by respondents by geographical area 2012.

Machines	UM	Mountains	Hill	Plain	Total	
Cart	no	19	1	7	27	30
	%	70.37	3.7	25.93	100	x
Circular	no	7	4	1	12	13.33
	%	58.33	33.33	8.33	100	x
Chainsaw	no	16	6	8	30	33.33
	%	53.33	20	26.67	100	x
Mill	no	7	1	5	13	14.44
	%	53.85	7.69	38.46	100	x
Tractor	no	x	9	7	16	17.78
	%	x	56.25	43.75	100	x
Plow	no	1	7	7	15	16.67
	%	6.67	46.67	46.67	100	x
Seeder	no	x	1	3	4	4.44
	%	x	25	75	100	x
Harvester	no	x	x	2	2	2.22
	%	x	x	100	100	x
Trailer	no	x	11	7	18	20
	%	x	61.11	38.89	100	x
Truck	no	1	2	1	4	4.44
	%	25	50	25	100	x
Auto Car	no	12	21	19	52	57.78
	%	23.08	40.38	36.54	100	x

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

Culture technologies require the use of tractors and agricultural machinery as an important means of practicing profitable agriculture. Also, the transport of production, its processing, means for processing the wood helps to facilitate the work of the agricultural holdings and is an innovation in agriculture.

In the Table 4, we analyzed tools, by groups, according to their usefulness:

- for agricultural works : tractors, plows, seeders and harvesters, of which the most numerous are tractors - 16 , plows - 15, especially in the hills and plains;
- Woodworking: -12 circular, chainsaw - 30, here they the largest share have the mountains where this occupation is the base;
- production processing – mill, a number of 13 respondents answered that they have a mill in their household, 7 of the mountain area, 1 of the hill and 5 from the plain;
- own transport or production: truck, trailer, cart or auto car. Over half of the respondents 57.78% have auto car, about a third (30%) cart, and truck and trailer in hilly we find the most machines.

Trade activity. Among those surveyed, we find also respondents who are involved in trade of obtained productions.

Table 5. The percentage analysis of products sold quantities

Sold quantity	Mountains	Hill	Plain	Total
50%-100%	x	5	9	14
30-50%	14	14	7	35
Don't sell	16	11	14	41

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

Thus, it appears that 41 of the respondents, ie 45.5% of total respondents, do not sell anything of the production, all used for own consumption, 38.8% sell some of it (between 30 and 50%), 14 being in mountain, 14 hill and 7 from the plain, and those who sell their entire production are mostly in the plains - 9 people and 5 from the hill, the latter - which represents 15.55% of total earn their living from agricultural business.

Table no. 6. The correlation between the quantity sold and the the surface in exploitation

Surface	Sold quantity				Total	
	UM	100 %	30-50%	0%	Nr	%
<1 ha	No	2	4	11	17	18.89
1-3 ha	No	5	8	19	32	35.56
3-6 ha	No	5	13	8	26	28.89
6-9 ha	No	1	7	0	8	8.89
>9 ha	No	1	3	3	7	7.78
Total	No	14	35	41	90	100
	%	15.56	38.89	45.56	100.00	x
Indicators	Testul χ^2	Significance level				
	\leq	0.1	0,05	0,01	0,001	
CHITEST (value Sig)	0.0372					
Liberty degrees	8					
CHIINV (Chi theoretical)	\geq	13.36	15.51	20.09	26.12	
CHIINV (Chi calculated)	16.39		*			
Pearson Coeficient	0.392					

Source: Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations, Buzau county [1]

Analyzing the relationship between the surface which it operates and the amount that they sell of the products obtained (Table 6) shows the following situation:

- Those who sell part of their production, with the share of 38.89% of the total fall in - 4.4% of those under 1 ha, 8.8% have between 1-3 hectares, 14.44% of category 3-6 ha, 7, 7% of category 3-6 ha and 3.3% of those operating over 9 ha;
- Of those who sell everything they produce, the majority hold of category 1-3 ha and 3-6 ha, accounting for 5.5% of the respondents each;

CONCLUSIONS

Following this analysis , we drawn the following conclusions:

- The holdings have a major 'subsistence'character, with an average size of 1-3 ha / holding, a percentage of 7.8% of these have a commercial character , with over 9 ha of agricultural land in private ownership;
- The current land resources and livestock assets of households, their endowment with equipment and necessary material basis for agriculture practice does not demonstrate an encouraging situation of households that produce a third of their capacity.
- The obtained production is in a very high percentage used for own consumption, of which most are respondents in the mountains, though there are a small part of the total respondents who work in agricultural business (15.55%) with full production achieved sales.

Results that in Buzau County agricultural holdings practice an underdeveloped agriculture due to the lack of machinery and agricultural areas exploited relatively small.

REFERENCES

1. Raluca Necula, 2012 Questionnaire, Perception and dissemination of agricultural innovations,Buzau county
2. ***Village Bisoca, Buzău, http://ro.wikipedia.org/wiki/Comuna_Bisoca,_Buz%C4%83u
3. *** Village Pietroasele, Buzău, http://ro.wikipedia.org/wiki/Comuna_Pietroasele,_Buz%C4%83u
4. *** Village Gherăseni , <http://primariagheraseni.ro/>