

STUDY ON INTEGRATED SYSTEM ORGANIZATION IN CEREAL PRODUCTION IN MICRO TG. BUJOR, THE PLATEAU COVURLUI, GALATI COUNTY

STUDIUL PRIVIND ORGANIZAREA ÎN SISTEM INTEGRAT A PRODUCȚIEI CEREALELOR, ÎN MICROZONA TG. BUJOR, DIN PODIȘUL COVURLUIULUI, JUDEȚUL GALAȚI

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Abstract. *The area studied is located in the central and north-eastern county of Galati and includes the urban center of Tg. Bujor with neighboring municipalities Varlezi and Jorasti with associated villages, totaling an agricultural area of 18,850 hectares. Has specifically sought a separate territory in the sense that all agricultural land is located in Covurlui Plateau, a wide variety of soils, predominantly chernozems in various stages of degradation. The area is characterized by favorable climatic conditions for cereal grains. Share of arable land has 75.56% 17.92% followed by natural grassland, vineyards and orchards 5.68% 0.84%. The private sector represents 95.73% of agricultural area. Main effect is intended by integrating crop production is profitable growth, increasing economic efficiency, which is not only an economic system organized, large parcels of arable land, the application processes and culture-specific orientation livestock, providing a higher recovery of all resources.*

Key words: integrated system, organization, production, cereals, profits

Rezumat. *Zona luată în studiu, este situată în partea centrală și de nord-est a județului Galați și cuprinde centrul urban Tg. Bujor, cu comunele limitrofe Vârlezi și Jorăști, împreună cu satele aferente, totalizând o suprafață agricolă de 18.850 ha. Teritoriul cercetat prezintă un specific aparte, în sensul că, suprafața agricolă în totalitate, este situată în Podișul Covurluiului, cu soluri de o mare varietate, predominând cernoziomurile, în diferite stadii de degradare. Zona se caracterizează prin condiții pedoclimatice favorabile pentru cultura cerealelor boabe. Terenul arabil deține ponderea de 75,56%, urmat de pășunile naturale 17,92%, viile 5,68% și livezile 0,84%. Sectorul privat reprezintă 95,73% din suprafața agricolă. În ceea ce privește structura culturilor, cerealele boabe ocupă ponderea de 63,68% din suprafața arabilă, din care porumbul boabe 34,68%, grâul 25,21%, orzul 2,25%, orzoaica 1,48% și ovăzul 0,06%. Efectul principal care se urmărește prin integrarea producției de cereale este creșterea profitului, creșterea eficienței economice, care nu se poate decât într-un sistem economic organizat, cu suprafața arabilă pe parcele mari, cu aplicarea proceselor tehnologice specifice fiecărei culturi și orientarea către creșterea animalelor, care oferă o valorificare superioară a tuturor resurselor.*

Cuvinte cheie: organizarea, sistem integrat, producției, cereale, profit

MATERIAL AND METHOD

For the study were used official statistics from the Department of Agriculture and Sustainable Agricultural Centre Galati and Tg. Bujor, which operates the city's agricultural territory Tg. Bujor, Jorăști and Vârlezi.

We used the classic methodology specific technical and economic analysis (Ciurea et al., 2005). Indicators used refer to the size and structure of agricultural land in the settlements made Tg. Bujor, Vârlezi and Jorăști and structure of plant production industries, and average total production in 2009. For future development were identified opportunities to integrate activities of cereal production.

RESULTS AND DISCUSSIONS

Overview of the studied microregion

The area studied is located in the central-eastern and north-west of the county of Galati, and in the geo-morphological point of view Covurlui Plateau and covers administrative territories of three municipalities: Tg. Bujor (the urban center in 1968 with associated villages and Moscu Umbrărești) Jorăști village (Lunca and Zarnesti as related villages) and Vârlezi commune with Crăiești village.

The relief is generally monotonous, with long ridges and broad plateaus. A feature of this unit is geo-morphological duplication and consistent character of the river system which has north-south rivers as Chineja, Suhurlui, Geru and Mălina, separating the peaks extend, giving them part of the deal.

Climate zone sector belongs entirely temperate continental climate and geographical position due east in the country, taken in the study area falls within the realm of climate hill. The average annual temperature is of 10 degrees Celsius.

Generally summers are hot, average July temperature being 21 degrees. Instead winters are quite harsh, with an average interval between 160-200 days of frost and average January temperature of about -3 degrees Celsius. It should be noted that the transition from the warm season is suddenly cold and vice versa, because invasion of warm air masses from the southwest generally producing winter thaw and snow melt is a relatively short period of time.

Rainfall record low is between 475 and 500 mm / year.

Prevailing winds are from the north and north-east. Average wind speed is around 3m/sec value.

As regards solar radiation, it is 125 kcal/cm² /year and duration of sunshine is 2,000 hours per year.

As for pedology cernoziom area occupies the largest due to large spread of steppe. Its characteristics are high in humus content and the horizon (3 to 5.5%) which is rich in nitrogen and phosphorus, have high base saturation (90-100%), neutral or slightly alkaline reaction.

These soils provide favourable conditions for developing agricultural plants.

Types of farms

In the area of individual farms the study taken holds half the agricultural area of each administrative territory (table 1).

Table 1

Types of exploitations and agricultural area

Types of agricultural exploitations	Agricultural territory of the locality:					
	Vârlezi		Jorăști		Tg. Bujor	
	S. ha	%	S. ha	%	S. ha	%
S.C. agricultural private	3565	45,48	1025	22,76	1316	20,22
Family associations	793	10,12	730	16,21	830	12,75
Individual households	3088	39,39	2413	53,57	3817	58,65
S.C. with state capital	10	0,13	0	0	458	7,04
Local council	382	4,88	336	7,46	87	1,34
TOTAL	7838	100,0	4504	100,0	6508	100,0

These smaller households to four hectares, without mechanical means and that in fact they provide little economic power. No other types of farms, except private agricultural companies have a legal personality development too large, which makes the overall economic efficiency of agriculture micro analysis is limited (Ciurea et al., 2005).

Without good organization, and system setting (family associations and agricultural companies) results by merging land and practice of modern production technologies can not speak for farm viability and efficiency.

Structure of categories of use

Of the total area of 18,850 hectares micro-region analyzed, farmland occupies most of respectively 75.56% (figure 1).

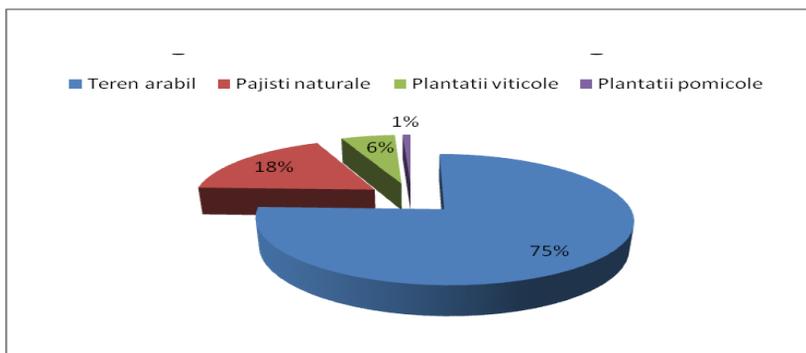


Fig. 1. Structure of categories of use

Other categories of land use have reduced except natural grassland, with 17.92%.

Crop structure

In micro-zone studied, the main grain crops are cereals (table 2).

Table 2

Crop structure

Specification	Total arable in the studied zone	%	Arable land of the locality		
			Vârlezi	Jorăști	Tg.Bujor
TOTAL ARABLE	14.243	100,00	6.164	3.631	4.448
Cereal grains	9.072	63,68	3.791	2.270	3.010
Maize	4.939	34,68	1.536	1.495	1.908
Wheat	3.592	25,21	1.769	775	1.047
Barley	320	2,25	265	-	55
Two-row barley	219	1,48	212	-	-
Oats	9	0,06	9	-	-
Other cultures	4.199	29,49	2.048	939	1.212
Uncultivated land	973	6,83	325	422	226

Grain cereals occupying 63.68% of the surface of the wheat consumed 25.21% and 34.68% maize. Other cereal crops occupy very small areas, barley 2.25% 1.48% two-row barley and oat crop at the rate of 0.06%.

If we analyze the structure and cultures share certain types of grain farms, we find large area occupied by maize in individual farms, having intended to meet family needs, and agricultural companies are more oriented to cereal grains because of the integrated system of technology and their possibilities for integrated - table 3 (Ciurea et al., 2005).

Table 3

Cereal crop structure by type of farm and average production in 2009

Specification	Total	Agricultural individual households		Agricultural companies	
		S. ha	Kg/ha	S. ha	Kg/ha
TOTAL ARABLE	14.243	8.425		5.818	
Cereal grains	9.071	5.616		3.455	
Maize		4.289	3.280	650	3.770
Wheat		1.115	2.746	2.476	3.615
Barley		160	1.500	160	3.047
Two-row barley		52	2.500	160	3.340
Oats		-	-	9	1.555
Other cultures	4.199	1.836		2.363	
Uncultivated land	973	973		-	

Table of contents that were previously obtained average cereal production levels higher than commercial agricultural societies individual farms, which means that appropriate technology is practiced with all technological links in terms of limiting climatic factors.

Integrated Activities

The main purpose of the company S.C. Agrojor SRL of Jorăști is cereal cultivation, the company was founded in 2004 by the European Agricultural Fund for Rural Development. Except for agriculture in 2004 when the company recorded losses in subsequent years and until now there has been a profit and the economic rate of return last year was 21%. The company is privately-owned stock and is engaged in vegetable production and marketing of agricultural products, mainly cereal grain products. The company owns an area of approximately 300 ha of agricultural land of which 10 hectares of natural grassland and 687 ha of arable land on lease, totalling 987 hectares.

The plot is merged, plots having area between 30 and 100 ha, thus creating the possibility of applying modern technologies.

The company has 9 employees, of which six men working on equipment and repair shop. Employees are the employment contract of indefinite duration, with activities throughout the year. Wages are paid to date and material basis for taking the production cycle 2009-2010 is provided. Thus in autumn 2009 were 457 hectares sown with wheat, 365 ha rape, and in spring 142 ha spring two-row barley.

Consumer culture has developed a wheat production of 3500 kg / ha and barley consumption from 3620 kg / ha.

This company has tractors, combines and farm equipment, reliable performance, high productivity with low specific consumption, which enables

works in optimal time, quality and production without lost motherland and loyalty.

This year, the unit has experienced difficulty turning cereal production for consumption due to the imbalance of demand versus supply in the market low.

Hence it is clear orientation livestock, which offers a higher recovery of all resources.

In conclusion, cereal crop production may not be profitable without the application of modern technologies on compact surfaces with partial recovery of production in the livestock sector.

CONCLUSIONS

1. Organizational structures are poorly developed, predominantly small holdings (1-4 ha.), with low mechanization and low economic efficiency.

2. Turning grain production is greater, through integrated activities (livestock and grain processing).

3. Ensuring optimum size of farms (lease and consolidation), representing a growth of inland area.

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